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DAHLIAS



MARCH, 1886.

THE MEETINGS of the Horticultural societies, this winter, throughout the country have shown all the old interest and enthusiasm of their membership. The Massachusetts Horticultural Society has been holding weekly meetings, and a number of valuable papers on horticultural topics have been presented, and numerous questions of interest have been considered. The practices of this society constitute a model for local kindred societies of either large or small membership, though to be modified as may be desirable in particular cases.

At its meeting on the 16th of January, Mr. JOSEPH H. WOODFORD read an account of "A Trip to the Tropics," which had been made by himself; the particular region was that of Central America. The following is an extract:

"To those not accustomed to tropical vegetation the Palms present the most striking appearance. The Cocoa Palm is the most familiar, as it always grows along the coast, and often with its roots in the salt water. Palms of various kinds, some with smooth trunks, some covered with spines, and some with a fibre suitable for making into cordage, are found in the forests. The most beautiful of the large-growing kinds is the Attalea Co-hune, which resembles a young Cocoa Palm, but the trunk is more sturdy, and at the base of the leaves is found the

hempen fibre used for cordage, and several bunches of nuts, resembling huge bunches of Grapes. It grows only in very rich soil in the interior; has fronds thirty feet long and four feet wide, interlacing overhead in most wonderful luxuriance, creating the desire that all other admirers of the beautiful might behold them. The nut of this Palm yields oil of the finest quality for culinary or mechanical purposes. The woods are full of Sarsaparilla, Dipladenias, Bignonias and other vines, growing in most places so numerously and luxuriantly as to be impenetrable for man until he cuts his way through, and mixing in confusion the ornamental and useful."

On the return trip, while stopping at Belize, Mr. WOODFORD made arrangements to go into the woods and collect plants. A donkey cart and driver, with a long-handled chisel and a machette, were the equipment. Starting on the principal street of the city and going about three miles the road became nearly impassable, and they began their collection on the return to the city. The cart was loaded with epiphytic plants, which, when packed for shipment, filled nine cases. Some of the Tillandsias, Billbergias, Orchids, Cacti and Aroids were very curious, but he was told that among the mountains, thirty miles inland, he could obtain much choicer Orchids in quanti-

ties sufficient to load a ship. The country offers a rich field for the botanist or collector of plants, where they can fairly revel in the luxuriance of nature.

At the same meeting the President of the "Tropical Products Company," Wm. T. BRIGHAM, was present, and made some statements in regard to Central America, mentioning that since he last appeared before the meeting he had been to that country. "Upland Rice flourishes on the dry land, growing six feet high, while in Louisiana the swamp Rice is never above eighteen inches or two feet high. Figs and Grapes thrive admirably. There are in the woods many beautiful timbers for cabinet work that we know nothing about, but they are so heavy as to sink in water, and are difficult to get out over the soft soil. Cotton grows in six months to a tree eight inches thick, and so huge that a man cannot reach the lower branches, but must have a ladder to pick it. It may be picked every day in the year. The rainy season lasts about nine months; every night during that time it pours so that an umbrella is no protection. In the dry season there are three showers every day, and no dust, as in the dry season in California. The highest range of the thermometer was 80°, which is not as uncomfortable as 76° in Boston, and the lowest 70°. There is no summer and no winter. If Pineapples are ripe this year in January they will not be ripe at the same time next year, but in nine months from the preceding crop. The Pineapples average five pounds in weight, and the whole interior is eatable. The stem of the Banana is cut down as soon as it has borne; it contains a fibre, between hemp and silk in character."

At the meeting of the same society on the 30th of January, J. B. HARRISON, of Franklin Falls, N. H., spoke on forestry, giving an intelligent account of the forests of this country, and indicating their importance. Among other remarks were these: "We want a National Forestry Commission, not composed of politicians, who can devote their attention to the subject and prepare it for the action of Congress, presenting a comprehensive plan for the management of public forest lands, both national and State. We need a change in the temper and spirit of the people, and in doing this we have a vast educational work before us.

"We need a school of forestry, where young men shall be educated and qualified to manage forests everywhere. Such a school should be proportioned to the resources of our country, and the students in it should feel that they have a career before them. Such schools exist in European countries, though yet unknown here, but we shall have to modify our ideas to suit the changed conditions of our times.

"In connection with the protection of forests, thought should be taken for the promotion of the higher landscape gardening, the highest art that we have anything to do with in this country. The artists who produce great pictures and statues are worthy of admiration and respect; but there is no higher work of art than that done by the artist who takes a tract of wild, unfertile ground and forms in his mind a picture of what it may be in fifty or a hundred years, and works to realize that ideal, patiently laying the foundation of what he will never see completed."

At this meeting JAMES COMLEY exhibited a seedling Tea Rose, by him named Francis B. Hayes; crimson, tinged with magenta, very fragrant, and described as a strong grower and free-bloomer. It is a seedling from Camille de Rohan, fertilized by President. A first-class certificate of merit was awarded for it.

The annual meeting of the State Horticultural Association of Pennsylvania, was held at Reading, commencing the 20th of January, and judging from the reports it was a meeting of unusual interest. The discussions related mainly to different varieties of fruits and their cultivation. Fine specimens of Apples and Pears were exhibited. In reference to the question, Are the Wild Goose Plum and other varieties of the Chickasaw type proving satisfactory in Pennsylvania, the following remarks were made: H. A. LONGSDORF, of Mechanicsburg, regarded the variety known as Wild Goose, grown in his section, as an unmitigated fraud; nor does he have much faith in any of the Chickasaw type.

Col. MCFARLAND, of Harrisburg, said he knows that HIESTER's folks are selling a great many Wild Goose Plums in the Harrisburg markets at ten and twelve cents a quart, the trees bearing splen-

didly; whereas the speaker has trees, supposed to be of the same kind, which do not bear at all.

HENRY M. ENGLE, of Marietta, thought that a number of varieties are being sold as Wild Goose. That variety bears best when near other varieties, so as to be fertilized by their pollen. That they are curculio proof is not the case. He regarded the Richland as the best for cultivation, and far superior to Wild Goose for bearing qualities. He named several varieties of the same type, highly recommended, which have not come up to expectations.

WOOD ASHES FOR APPLE TREES.

JACOB G. ZERR asked what is the best fertilizer for application to Apple trees.

Judge STITZEL answered the question by saying that wood ashes applied liberally to the orchard is as sure a fertilizer as we have. Wood ashes around young trees will prevent the ravages of the borer.

Mr. ZERR asked when the application should be made.

Judge STITZEL said that the work is done in the fall, and in the spring the ashes are leveled around the trees.

H. C. SNAVELY, of Lebanon, said that two years ago he killed about two hundred and fifty trees in that way, on account of a heavy rain falling subsequently and forming lye. He thought caution should be exercised.

Judge STITZEL said that his ashes are from spent bark, and he has never had any trouble.

Mr. ZERR related his experience in giving a coating of ashes from bark, and the result was a great crop. It was repeated the second year and there was another good crop.

A letter was read from J. K. SHARPLESS, of Catawissa, Pa., who stated that the Keiffer Pear had proved utterly worthless with him, and he intended to regraft all his trees of that variety.

Is the sparrow detrimental to the interests of the horticulturists; if so, how should it be disposed of? Mr. LONGSDORF replied that the first part of this question had been answered in the affirmative at Harrisburg, several years ago, and the Legislature had settled the second part by passing an act permitting the destruction of the birds. Judge STITZEL, C. B. NISLY, Treasurer THOMAS, Mr.

DAVIS, Rev. Mr. MEECH, JOHN GOTSHALL and other spoke against the sparrow, and showed the extent of the depredations committed by them in destroying the buds of fruit trees. EDWIN SATTERTHWAIT came to the sparrows' defence, and gave an account of the operations against the locusts, last year, to show its habit of killing insects. The tent caterpillar has also disappeared in his neighborhood, owing to the presence of the sparrows.

The subject of Retarding, or Refrigerator houses called out some interesting remarks. Dr. JOHN H. FUNK, of Boyntown, said that he is satisfied that a large body of ice is necessary to achieve success. He built a house to contain seventy-five tons, which answered very well, but when he needed the house most the ice was all gone. He is now putting up a house which will require over six hundred tons of ice. This building is forty by forty-five feet, constructed of stone, the walls being twenty inches thick, every crevice being filled out with mortar and spalls. Inside the wall is a dead air space six inches wide, and then a space three inches wide filled with ground charcoal. The cold storage room is eight and one-half feet high in the clear, and the ice chamber twelve feet high. At the front entrance there is a solid door opening into a vestibule large enough to contain three barrels. The vestibule opens into a packing room, from which there are three doors four inches thick opening into three separate apartments in which fruit is kept. There can be no atmospheric change in the rooms. There is an open surface above the ice chamber, with caps over the joists to catch all droppings. There are ventilators in the roof, and there is no possibility of the building containing foul air.

Dr. FUNK, in reply to further inquiries as to the construction of the floor, said that the floor is of simple construction, of Yellow Pine, with about four feet between it and the ground. There is a mortar floor underneath to keep out the rats. He is able to put in a ton of ice a minute by means of an elevator, worked by an endless chain, the ice being in large cakes, weighing about two hundred pounds each, as the ice packs better in large masses.

Mr. J. H. BARTRAM, of Chester County, being called upon, said that his refriger-

ator house is only sixteen feet square, and sixteen feet deep, requiring about one hundred tons of ice. It is partly in the ground, and did not cost over \$300. He then described its construction after the manner of an ice house. The general temperature is 37°.

In regard to keeping Peaches in ice houses, Mr. BARTRAM spoke of the profit in keeping the crop back for a short time to realize larger prices.

Dr. FUNK continued by showing how he realized \$3.50 and \$4.00 per bushel for Bartlett Pears until Christmas, when he could only get \$1.50 per bushel before he had an ice house. A Red Astrachan Apple can be kept until the following spring, and Strawberries have been stored for six weeks successfully.

A very full and able report of the fruit crop of 1885 was prepared and presented by CYRUS T. FOX, Chairman of the Fruit Committee.

The winter meeting of the Western New York Horticultural Society was held in this city, on the 27th and 28th days of January last.

The President, P. BARRY, in his address at the opening, reviewed, in a general manner, the horticultural events of this country during the past year, and regarded favorably the present situation for gardeners and fruit-growers. The remarks in regard to the fruit crop of last fall are of particular interest, and we quote some of the most important points:

"What we want to see in Western New York is first-class orchard culture. The soil made rich with fertilizers, the trees carefully pruned, the fruits thinned, if necessary, gathered in good season, carefully by hand, packed honestly and well, and sent to market by a well considered system, not sold to anybody who comes along at any price they may choose to offer. Our orchard crops may be doubled or quadrupled in value in a few years of thorough work. Without this, orcharding will be, and ought to be, a poor business.

"While Apples of the common run have been selling at \$1.25 to \$1.50, and at the most \$2.00 a barrel, fine well grown Kings, Newtown Pippins, Fameuse and others, were quoted in New York papers at \$6.00 to \$10.00 a barrel, and I know of \$6.00 being paid for Newtown Pippins of fair but not extraordinary quality. The foreign demand for American Apples,

though large at present, is in its infancy. It is destined to be immense if we only grow fruit of good quality and put it on the market in good style. So far our export of Apples, generally speaking, has not been well done. The English papers are constantly complaining of the poor quality and bad condition of a large portion of the American Apples, and in the very cheapest times say that 'prime, large, well-colored Apples will find a good market.' This is true of our home markets. Now let our orchardists aim at producing prime, large, well-colored Apples.

"The same line of argument applies to Pears, and, indeed, to all the fruits. A short time ago I saw in one of the agricultural papers a statement made by a Pear grower, that Pears had become so plentiful that he could no longer get \$2.00 a bushel, as in former years. Two dollars a bushel is a very good price at certain periods, but I have seen a great many Pears that would be very dear at \$2.00 or even \$1.00 a bushel. A poor Pear is worse than a poor Apple, and that is bad enough. Fine Pears sold in New York all through the months of November and December last at \$3.50 to \$5.00 per bushel; Anjous not less than \$5.00, Lawrence and others \$3.50 to \$4.00. I know of hundreds of bushels having been sold at these prices. They were fine Pears, in prime order, wrapped in soft paper and packed in clean new kegs and boxes, each holding a bushel. At the same time poor Pears were unmarketable. Some people may say this is fancy work and will not pay. This is not true. There was no fancy work about it from beginning to end—nothing but fair business-like culture and management, and it paid well and always will pay well. It is to be expected, of course, that as the production of Pears increases prices will decline, but I believe that for a generation to come the demand will be equal to the supply."

It is true that the methods of fruit-growers can be greatly improved in the manner here proposed, and their profits would probably be greater; but, even then, it is doubtful if the acreage of Apple orcharding can be greatly increased for some years, at least. The profits of Pear raising cannot be counted upon, and most of the planting of this fruit is now confined to family gardens.

CORRESPONDENCE.

GARDEN HINTS.

An experience of more than a quarter of a century in garden management has taught me some things which I should have found it profitable to have known as a beginner, and in the hope of helping others I will refer to some points of importance.

All quick maturing crops require much richer soil and better cultivation than those that are longer in maturing. Late Peas, like Champion of England, or Marrowfat, will yield a profitable crop on moderately rich land without manure, but the kinds that mature early in May must be furnished an abundance of plant food in such a form as to be at once available. The same is true of most, if not all, crops; the shorter the time in which they mature, the better chance they should have.

In all crops that come up thick and require to be thinned, every day's neglect after the plants are large enough to be thinned, reduces the yield of the crop. Beets, Carrots, Radishes, Lettuce, Parsnips, and all such crops, should be thinned as soon as you can get hold of them with thumb and finger. In planting early Potatoes some days may be gained by cutting the seed and spreading it in a warm room until it callouses and the buds begin to start, and to avoid danger of freezing the seed should be crowded down into the bottom of the furrow by stepping on it, and covered with two inches of partly rotted manure before the earth is put on. Planted in this way mercury may fall to 10° for a single night without injuring them.

Judgment must be used in covering seeds of all kinds, and the amount of earth and pressure must be regulated by the season. Most seeds planted early require light covering and no pressing of the earth, while midsummer planting calls for deeper covering, and in most cases the seed should be pressed firmly into the earth before covering.

All crops which come up small, like Carrots, Onions, Parsnips, and which will

require hand weeding, should be planted in perfectly straight rows and very narrow drills. If a crooked furrow three inches wide is made there will be required a large amount of hand weeding to clean them, compared to what there will be if a straight drill one inch wide receives the seed.

When land is to grow a second crop, as is the case with that on which early Peas, Potatoes, Lettuce, Radishes, &c., are grown, every thing should be on hand so as to take advantage of suitable weather, and to do the work at once. Evaporation is so rapid in the long summer days that land will often dry out in a single day so that a good seed bed can not be prepared. I have had an acre with the Peas standing on it in the morning, and before night had removed them, plowed, harrowed, dragged and marked off the land, manured it in the hill and planted it in Cucumbers for pickles; and often dry, hot weather would follow so that if I had delayed a single day I should have been obliged to have waited for another rain, which might have been too late for the crop.

Another thing I have learned is the importance of fining and compacting the surface at once in hot, dry weather. In preparing land for garden crops during the summer it is best not to wait to do a day's plowing, but every two hours to pulverize and fine what has been plowed, and for this purpose no other implement is equal to the plank drag.

In fighting insect enemies, such as the striped bug, cabbage worm, garden flea, potato beetle, &c., one cannot begin too early. Go over your Cucumbers, Melons and Cabbages every day from the time you get the first peep at them till they show the rough leaf, give them a little cultivation and apply gritty turnpike dust, when the dew is on; sift the dust through a fine sieve so as to take the pebbles out of it, and if it is mixed with an equal bulk of thoroughly fined hen manure, all the better.

All small, delicate crops which require hand weeding should be cleaned out at once as soon as they can be seen in the row. A delay of forty-eight hours will often double the work, and a week may entirely ruin the crop. The best time to destroy a weed is before it comes up, and the mere stirring of the surface for an inch as soon as the land is dry enough to work after a rain will kill nine-tenths of the weeds that have started. Make it a rule that a weed shall never go to seed on your garden. The average farmer's garden of one-fourth of an acre ripens enough weed seed to supply the entire farm, and it will take more than five years to get such a garden clean, but if

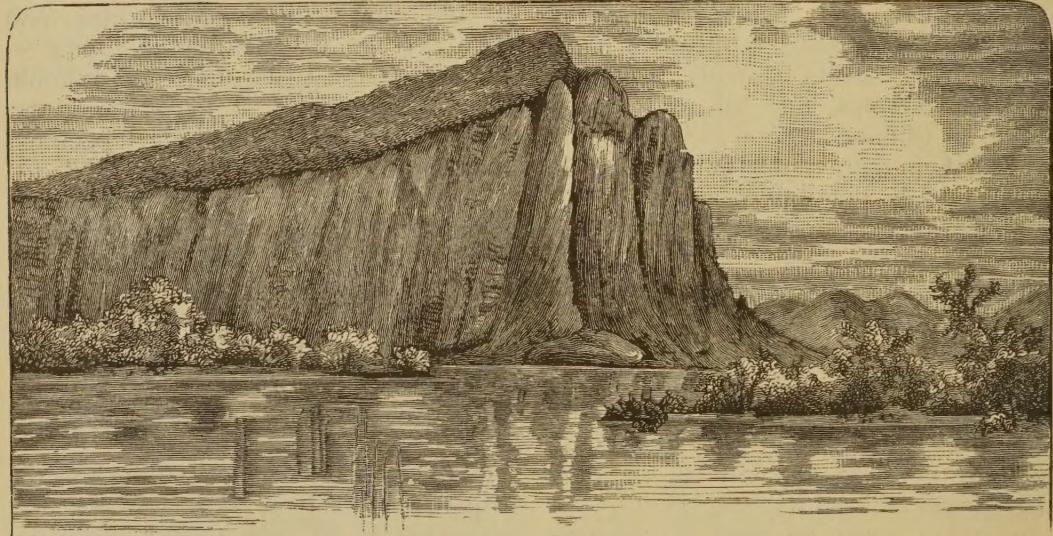
clean cultivation is persevered in the time will come when the labor of cultivating the garden will be reduced one-half. It is not difficult to keep a garden clear of weeds if all the crops are planted in row running the length of the garden; those that mature at the same time should be put near together, and as soon as past use removed, and the land thoroughly worked with the horse cultivator and some other crop planted. I keep all the garden in use, if it is only to grow Sweet Corn for the cows, and this planted as late as August 1st has tasseled and set ears and produced from each square rod enough good fodder to feed two cows a day.

WALDO F. BROWN.

IN THE GUNNISON COUNTRY.

Morning in the valley of the Gunnison! With what wonder-seeking eyes I looked out, for the first time, on the mountain-circled horizon that surrounded me. My earliest memory was of looking westward from the Denver plains, longing to thread the wild footpaths among the blue, mysterious hills, rising in a long barrier beyond the yellowing prairie

and unknown, marvelous stories were current of its resources and its dangers. Time has proved that it was valuable territory, but by no means a paradise. I had gazed with curiosity upon the photographs, the masses of crystals threaded with virgin silver, and others spotted with the more precious gold, shown by returned travelers. I had read letters



THE PALISADES.

grasses. One hundred and fifty miles of the range can be glanced over from a favorable point on the city heights. Then there was no city, only hopes of one, in the dull little pioneer settlement.

What Denver was then, Gunnison is now, a possibility. A few years ago Gunnison County comprised all of Colorado between the Snowy Range and the Utah line. Unsurveyed, unsettled, vast

and papers descriptive of the country, and even received pressed flowers from friends who had gone into the new country. Imagine then, my delight when, one day last June, I started for a sketching tour around Gunnison City, a place on the line of the Denver and Rio Grande railroad.

J. and I had to confine ourselves to one bank of the Gunnison, unless willing to

walk four miles up the river and cross the open ties of the railroad bridge. High water had swept away the county bridges long before my arrival, and they had not been rebuilt. The whole western slope of Colorado differs much from the eastern



STANDING CYPRESS—*GILIA VARIEGATA*.

in the more abundant rainfall and more important rivers. We roved through the thick green grass, looking for a favorable view of the Palisades across the swollen stream, and found one where the water had overflowed, and almost islanded a group of Cottonwood trees. The mud-colored pillars, streaked with dark red or brown, rose to the height of some hundreds of feet above the rapid current which washed their base. In the smoother pool in the foreground every tint and outline was distinctly reflected. Northward, through the trees we saw the blue-green slope of Mount Carbon and the cloud-like azure, crowned with white, of Mt. Wheatstone. J. took out her paint box and patiently sat down to reproduce the scene in colors, but the mosquitoes were too many for me. I drew a hasty pencil sketch and fled. I made about a dozen drawings of the Palisades afterward in color and pencil, but that view pleased me better than others and I painted it on my return home. One is

distracted by grander views from the beauty of the flowers in that region. Besides, they told me August was a more favorable month than June for finding the rarer varieties in bloom. The tiny white Daisies made clouds of white here and there, Sunflowers, with black centers, hugged the ground, and a five-petaled flower with a sweet perfume, I named the Gunnison Pink. There were tall bushes of Alyssum, and others with yellow flowers like Buttercups, which, in a smaller form, I had found in Jefferson county. The wild Scarlet Cypress, as it is called; and the large White Primrose, more fragrant than ours, were old acquaintances. Hay is the great crop along the upper Gunnison. A few garden plants, Radishes, Lettuce, etc., can be grown there, but the altitude (between 7,000 and 8,000 feet,) is too great for delicate growths. Up at Irwin and the higher camps, there is little summer, but the Alpine Flora has been glow-



GUNNISON PINK.

ingly described to me. I hope to study it at some future time. The most beautiful feature of the Gunnison country is the green of lovely valleys nestling within sight of white snows. The snow never melts on the Uncapahgre, south of Gunnison; on Mt. Wheatstone, to the northwest, it lasts until August. Winter there means three feet of snow, often cold, 40° below

zero, and continual stoppage of the trains by drifts in the cañon. Yet Gunnison people claim their winter climate is pleasurable.

ant, being free from the withering east wind that blows in Denver.

MARION MUIR.

WINTER FLOWERS ABOUT SAN FRANCISCO BAY.

Compared with the neighboring towns and its own suburban villas, the city of San Francisco has few flowers or trees, but compared with any other city in the United States of its size and commercial importance, it is a garden. It is wonderfully picturesque viewed from afar when every steeple and building on its many hillsides is conspicuous and effective, but it is shabby, irregular and dirty within, and only passably elegant in a very limited quarter. Its flimsy houses, its numerous narrow alleys and courts, and its untidy wooden pavements are, however, half redeemed from squalor by the ever-present greenness of narrow dooryards. In even the humblest of these the landlord carelessly sets a bunch of Ethopian Calla, or a Fuchsia and Geranium, leaving them to their chance of cultivation from the most shifting population in the world. But the genial climate will not let them perish, and the stranger in our street is astonished to find these pets among eastern house plants blooming about shabby little cots, or flaunting before squatters' cabins in the outskirts. I have tried to find a square outside the business quarter where there are not flowers in bloom in this month of January, but I cannot. The rains have sent the Callas up early, and the remnants of summer's blooms linger about everywhere, mingled with flowering shrubs which are in their prime in winter. In the better quarters of the town there are many carefully kept gardens, and an almost rural effect of ivy-covered porches and arbors.

But the city looks in all directions, but one, upon the bay; and it is on its eastern shores, where half a dozen pleasant towns nestle against the warm foot-hills, that summer lasts all the year. On any sunny day from October to May you find the air brilliant and soft; the wide, still bay, dotted with island-cones recalls that eastern sea, where in early winter "the birds of calm sit breeding." It is the midwinter holidays. The light rains of October, when the season is normal, make the first grass spring up, and by the middle of November there have been more showers,

or an early rain storm, which have turned the whole country-side green; the road sides and waste places, and last of all, the hills, have pushed a thousand germs that have lain covered with summer's dust since July. We call it Grass by force of association, but it is chiefly weeds and pasture clover. Still does our English speaking race cling, on this verge of its civilization, to the names with which it describes nature in the "tight little isle" of its forefathers; we call yellow flowers Buttercups and Cowslips, at random, and all little brown birds, sparrows and linnets, and all the green carpet, Grass. Grass is our expensive luxury; the native Grasses are few and chiefly confined to the mountain valleys, and in our towns lawns are only kept in order through the long drought by constant hosing. But in November the hose is laid by; the early rains have washed off a portion of the summer's dust, and the winter has begun to bud and blossom. A ride around Oakland or San Mateo, towns on opposite sides of the Bay, whether you choose the early or late winter, will bring into view more flowers than can be seen in the neighborhood of New York in any month of the year, excepting during that high tide of the year which arrives there about the middle of May, and here about the 20th of March.

But we were about to take a drive. The air is golden, the linnets and song sparrows are building and filling the trees with joyful snatches of shrill songs; green trees are on all sides, most conspicuously the Australian evergreens that are perfectly fresh during the summer drought, but make all their growth in the rainy season. Now they are clothing themselves in the tenderest colors, pushing long feathery young shoots, or preparing to cover themselves with flowers. Three or four species of Eucalyptus, and a half dozen kinds of Acacia, constitute the principal shade trees. These line all the streets; but spreading Live Oaks and various Firs and Cypresses, cluster around the home-sites and shade the public squares. The Live Oaks get a fresh crown

of shining young leaves about the end of the rainy season, and even the dusty Cypress hedges take a hue of spring. These hedges are characteristic. No fear of killing frosts hinders our gardeners from indulging in them, and they do so with great freedom. Our streets lack the grace of iron paling or elegant stone curbing; and the Cypress hedge is seized on to take their place. Here it has been left to grow to a lofty wall, hiding from view the garden, and trimmed into a stiff sombre avenue from the street to the porch; the low hedge springs with arches of green above the gateways; next you find it forming a closely-clipped wall in the rear of a pretty garden, and making a background on which bright flowers are displayed. Now it is clipped into cones and fantastic swans and beasts, now suffered to grow at random. All this never-ending Cypress gives a verdant air, but is rather tedious. Sometimes it is varied by a hedge of a beautiful native Cherry with leaves like Holly, rich, dark, shining green, but as this is of much slower growth, it is not yet freely used. Gay flowers meet the eye on all sides; in the early winter, Salviyas, fiery as the sun, and Fuchsias in all shades of crimson and red; in later winter, and in fact in all seasons, Scarlet Geraniums and Pelargoniums, as the large-flowered species are always called to distinguish them from the common Fish Geranium. Of Fuchsias, which are in their prime from July to January, there is a tiresome abundance. Very often five or six varieties grow side by side in the same garden, forming alleys or covering porches, or trained about a bay window. There is literally no end to them. Only the heaviest rains of the late winter force them to rest awhile. Where anything will grow Nasturtiums will; and if they are not blooming, they are clambering around in riotous profusion, spreading their pale, umbrella-like leaves to the sun. Roses blossom all winter, if they are allowed to. In the intervals of the heaviest rains we gather Safranos and Pink Noisettes; poor winter-roses we call them, because they fall short of the luxuriance of spring, but they are "not wholly mean." About October there is a second season of fine Roses, which linger through the winter, as those of spring last through the dry summer.

One of the very prettiest of the winter flowers is the Plumbago from the Cape of Good Hope, with long, slender thyrses of rare, pale lavender flowers,—a tall, handsome, free blossoming shrub; this lasts through the holidays, and until the Violets take up the tale. There are Pansies and Mignonette and Alyssum always, and Stocks, and bright Fig-Marigolds, and a few Carnations, and brilliant Wall-flowers that continue through the whole winter.

But the small flowering plants are overshadowed by shrubbery, much of which is in flower soon after holidays. A faint suggestion of semi-tropical flora is preserved by the bunches of Pampas Grass, a Yucca, a Palm, a shining East India Rubber Tree, a Tree Fern, or less frequently a giant Century Plant. These seem to have been the special fancy of the early settlers; no amount of neglect will kill the Yuccas, whose crown of long, dusty leaves hang from the top of their poor old scarred trunks amid the rubbish of many forgotten ruined gardens.

Our favorite shrubs are the Pittosporum and the Laurestinus. The former grows to a great size, and the latter, which none name but to praise, is almost constantly in flower. But in January it is luxuriant. Women "rave" over a cluster of its many tinted flesh-colored flowers, and gardeners are never tired of it. It is more common than the New England Lilac bush, adorning every finished lawn, and filling every plain little door-yard. Much of it is used for hedges. Another beautiful winter bloomer is the Cestrum, both crimson and salmon-colored, whose large, full clusters bend under the heavy rains, and lift themselves in beauty in every interval of sunshine. A great many species of the family to which the Cestrum belongs, are perfectly at home in our climate, but it is a family with a bad reputation. The beautiful snowy or purple berries of this shrub are deadly poisonous. It is said of them that they will cause death if rubbed into a wound, and (though on no very high authority,) that the Bushmen, of Africa, poison their arrows with their juice. The same suspicion is banishing the Potato-jasmine from Oakland, where, for years it has flourished, covering the unsightly little houses of pioneers with grace. This, too, flowers a little in

the winter. If it were not that it lacks fragrance, it might be pronounced the most beautiful of flowering vines. When it first blossomed in England in the Kew Gardens, in 1840, it was hailed with great delight. But there it was and is exceedingly fragrant, as are also the Cestrums. Here they have not a vestige of odor. This lack of perfume in all the gardens of California is very marked, an effect, no doubt, of the dryness of the air. Even Honeysuckle, Heliotrope and Mignonette have to be shaken or handled before their perfume is perceived. The delicious air of June, which, in the Atlantic States, bears the sweet smell of blossoming Grapes and Seneca Grass, and Linden and Honeysuckle even into the heart of the city, is a pleasure wholly unknown here. I have stood in April in a garden where a thousand Carnations and Roses were blooming, but there was not the slightest fragrance in the air, yet the Pinks are as aromatic as any. Only the Violets, from their humid beds, manage to diffuse their sweetness, and the Acacias, so overpowering in a moist conservatory, give out some faint, tropical wafts as you drive by them. When Locusts are in bloom in New England, you will know it afar; here, the April air does not bring a trace of perfume from them.

The Acacias are the pride of our winter streets; even the dullest eye is gratified by the gorgeousness of their golden crown of flowers. They become one mass of color, which the pale olive of their leaves enhances, and are in bloom for perhaps four months, though in their prime about half of that time. Not less than six species, varying in size and color and in the character of their peculiar, undeveloped foliage, are commonly planted. *Cassia grandiflora*, with large, golden-yellow flowers, and locust-like foliage, remains in bloom half the year.

There has been no attempt to exhaust the catalogue of winter flowers in this sketch. Many that have been before my eyes all the season might be added; but the total effect of a season of greenness and blossom has been recorded. All this is as it is because of the beautiful climate, rather than as the effect of much effort on the part of cultivators. Horticulture has not yet received much attention. Our professed florists make a monotonous show of inferior flowers, and

most of the neat, bright gardens that adorn the towns belong to people of small means, who keep no gardeners and plant what their neighbors do.

But a few handsome villas where beautiful plants are never out of bloom, give proof of the capabilities of the climate to surpass everything on the continent. Above all it is favorable to the Rose, which loves this cool, even temperature. There may be finer Roses "made" by eastern culture, but where else does every creature above a beggar, enjoy Roses all the year round? The flowers, too, settle silently the chronic disputes about the comparative mildness of neighboring places, disputes which, like those among churches, are hottest where differences are slightest. I have known the four sides of a tree (a "big tree"), to engage the most animated controversy of a pleasure party, unable to agree on which side to prefer the climate. But whatever verdict society may give, there is a sentence pronounced by the flowers that is beyond appeal. Our wind-swept peninsula of San Francisco can never be favorable to gardens.

Men and women cross and recross the Bay with their boasts, and complaints; it is abominably windy or dusty, or hot or cold in either place according to the opinions of either. But the flowers and trees mutely declare that San Francisco is too windy for their health and prosperity; they can be made to bloom, but they do not luxuriate. Our National Botanic Gardens ought to be somewhere under the sunny shelter of the foot-hills or the west slope of the Coast Mountains, where, in a semi-tropical belt that penetrates the mountains, Oranges ripen out-of-doors. When our affluent families shall have decided that California is their home, and that there is nothing better for them in the world than to stay at home and develop its resources, we shall have another story to tell of winter and of summer flowers. Our beautiful wild flowers, almost exterminated by grazing, will figure in these gardens of the future. It would be perfectly easy by merely enclosing pastures, to restore these brilliant parterres of glowing blossoms that enchanted the earliest travelers, and from which the gardens of Europe received most of their choicest additions. At present, the great passion is for South Ameri-

can and Australian plants, and we are chiefly confined to a few fashions set by the florists. Many plants are introduced, too, that are not adapted to our peculiar

conditions of drought and moisture; but in all this, there is time for much improvement.

ISABELLA G. OAKLEY.

A TREE CACTUS.

The picture represents a Cactus growing within a few feet of the back door of a Mexican adobe house. Many observations lead me to the conclusion that all the jolly, happy people of earth do not live in mansions, and I often think when I

these people of the love of the beautiful; their necessities are few, their ambition dormant, so the sun rises and sets, and to them it is all right. How people can live with such a horrid stickery thing just outside their door, where children



TREE CACTUS.

hear people fault-finding, "you have seen too much of the smooth of life," and not enough of the rough side, or you would be content to take life as it comes and make the best of it. The Mexican is much like the Indian—he has a good time to-day, let to-morrow take care of itself. Of course, this will lead to the result that some days he will be out of grub. The Mexicans generally, I speak of the poorer classes, live in their "doby" houses without a tree or bush or flower around them, and our picture illustrates the dawn to

may run against it, or grown people meet it on dark nights, is more than I know, but the fact remains. This Cactus bears an edible fruit, about the size of an egg. The trunk of the Cactus is leaf-shaped first, in fact, a leaf lying or planted on the ground takes root, and one leaf forms on the other, or grows out of it, and by-and-bye it changes its stock to tree-shape; we have one transforming now in our garden, here in California. Our picture was taken in Arizona.

E. A. BONINE.

HARDY PERENNIALS FOR BEDS.

Every progressive gardener having in his charge public grounds is seeking for something new to attract attention, elaborate and laborious beds are worked out in succulents, and other bedding-out plants, varying only from one year to another in design; the same plants year after year are familiar to all, by appearance, if not by name, many with no beauty except as they form a patch of color in a patch-work design. It is late in the season before an attractive display of bedding out can be made, and, as the first frosts kill everything tender, the beds are often anything but attractive after this.

Those in charge of cemeteries find an especial need for something to brighten up their grounds on Decoration Day, the one day in the year when the largest number of visitors are present. Of course it is out of the question to have a display of tender bedding-out plants as early as this. Tulips are past, Daisies and Pansies are nice, but they cannot be used everywhere, and in most places there are not the facilities, time or funds to propagate the large number of plants that would be required to fill out the beds, and, in fact, this is the obstacle in the way of many places, public and private. What is wanted is something not expensive, easily propagated, and easily cared for with little labor and expense—something we can always depend upon for a display at the desired season.

Among hardy herbaceous plants are several that will fill the bill and be of the greatest value for spring and early summer beds. The varieties of *Phlox subulata*, the Moss Pink, will stand among the first for the purpose named. They form dense mats of fine evergreen foliage, are uninjured by cold or heat, the flower buds are formed in the fall, and in spring from the middle of May to the middle of June the plants are covered with a sheet of flowers. There are several varieties, and the most common kind has dark green foliage and bright purplish crimson flowers. The variety *nivalis* has lighter green foliage and white flowers.

The Rev. JOHN NASON, of Aldborough, England, has raised many fine hybrids and seedlings, and among them are three fine varieties of this *Phlox*. Variety *compacta* is very dense and compact with

bright rose colored flowers, variety *Model* has very showy rosy-carmine flowers, and *The Bride* has pure white flowers with a red center.

The perennial Candytufts are also valuable. They form low spreading plants with dense and dark green foliage, and are covered the last of May and first of June with compact bunches of flowers an inch or more in diameter.

Iberis sempervirens has pure white flowers that come early. *Iberis Gibraltarica* has narrower leaves and later flowers that turn pinkish with age; and a new hybrid variety has red flowers, this will be, if it proves to be as represented, a valuable acquisition.

Veronica rupestris forms a mat of short trailing stems covered with fine foliage, and has, in June, abundant short spikes of dark blue flowers.

The Double Sneezewort, *Achillæa Ptarmica flore pleno* is valuable for a summer and autumn display of white. It is easily propagated and hardy, and bears its full, double, pure white flowers in the greatest profusion right up to hard frosts. The flowers are valuable for cutting, of good substance and very pretty.

A fine plant is the variegated Day Lily, *Funkia lancifolia variegata*. The variegation is very marked, the whole plant appears a bright yellow in spring and summer, and holds its color well late into the season. The edges of the leaves are undulated, the plant is dwarf and compact, and nothing makes a more beautiful and desirable edging.

The Golden Leaved Thyme, *Thymus vulgaris variegatus*, is very bright in spring, and would be valuable for beds.

There are white foliage plants that might also be used for summer bedding; *Antennaria*, *Cerastium*, and *Artemisia*, with evergreen foliage forming dense tufts.

For yellow, in spring, the *Erysimum pulchellum* is very fine. The plant forms oval masses of fine evergreen foliage, and is covered with the brightest yellow flowers in early spring that last for several weeks.

For permanent beds the Grasses are unexcelled. There is now such a variety, with handsome plumes and varigated foliage that a most interesting and graceful

bed may be made that will be an attractive feature in any grounds.

Plants to be used for early bedding should be placed in a nursery prepared for the purpose. Small plants may be put in either in spring or fall, and after a season of vigorous growth will be from six to twelve inches in diameter and ready for use.

In spring they should be taken up carefully with a ball of earth attached to the roots, and planted thickly in the beds where wanted. They will form a dense mat of green and will come into flower as soon or a little later than they would if undisturbed. The flowers will last in favorable weather from three to four weeks. Then, when the beds are wanted for other uses the plants may be removed, and divided if too large, and then be transplanted into the nursery. This frequent transplanting, instead of being an injury to the plants, is a benefit, when they are used for this purpose, for the roots are made compact and retain the earth, an important consideration for the success of the plant in moving.

There are many hardy Sempervivums and Sedums that would be of value for temporary or permanent beds. The species and varieties vary in form, color and size greatly, and many of them have pretty and showy flowers in pink, purple, white and yellow shades. They are

easily propagated, can be moved safely at any time, are perfectly hardy, and a large stock could be carried with very little expense. The Sedums and Sempervivums and the hardy Opuntias will grow anywhere they can find a little soil or a moist crevice in which to push their roots, and many barren ledges and rough rocks might be made interesting by filling crevices, pockets, and beds with these hardy succulents.

The use of hardy herbaceous plants for the decoration of public grounds is not an untried experiment. It has found able advocates among gardeners, and practical results may be seen in Swan Point Cemetery, Providence, R. I., where the hardy plants have been used extensively to great advantage by the Superintendent, Mr. TIMOTHY McCARTY.

There are also many shrubs and small growing evergreens that could be used in making permanent decorative beds and groups in public or private grounds. There has been, within some years, a considerable addition to those plants that are attractive throughout the season by reason of their richly colored foliage; and there is a broad field for the gardeners who will pull out of the well worn ruts and try something new, and use to better advantage the many valuable hardy ornamental plants within their reach.

WARREN H. MANNING.

A VARIEGATED FERN.

Under the popular but rather indefinite name of Silver Fern, we have the well known *Pteris argyrea*, one of the most ornamental Ferns in cultivation at the present time. It is an evergreen greenhouse plant of robust growth, the fronds being from two to four feet in length, the pinnae being pinnatifid and the lower pair bipartite and of a beautiful and distinct silvery white color, margined with bright green, the decided contrast in color making it one of our most valuable ornamental plants for greenhouse and conservatory decoration, and, besides, it is equally at home in the window garden. It is a plant that can be easily cultivated, and should be given a compost of turfy loam and one part of well decayed leaf-mold, well mixed. In potting use porous or soft-baked pots, and let them be proportionate to the size of the plant, and see

to it that they are well drained; for although the plant requires a liberal supply of water, yet it dislikes to have water standing around its roots. During the plant's season of growth, which is principally during the summer months, it should be given a warm, moist atmosphere, and a liberal supply of water both overhead and at the roots, but on the approach of cold weather the supply of water should be gradually reduced. During the winter season the plants should be given a temperature of from 50° to 55°, and enough water at the roots to prevent them from becoming dry.

Propagation is effected by a careful division of the plant, and also by spores, the former being for amateur cultivators the most preferable method of increasing their stock. In dividing the plants, select those that have compound crowns, and

cut them apart with a sharp knife, being careful to have some of the rootstock with a portion of the roots attached to each. Now pot them, using as small pots as possible, water thoroughly and place in some cool, damp, shady situation until

As prevention is better than any remedy, all such conditions should be carefully avoided. It is also advisable to carefully examine the plants occasionally, and if any scale are noticed, they should be carefully removed. Slugs are also very



PTERIS ARGYREA.

they commence to root, when they can be removed to their former situation. In order to obtain good specimens the young plants should be repotted as often as necessary, and every available means employed to secure a rapid and uninterrupted growth.

This Pteris is rather subject to the scale, especially when grown in a dark situation or crowded among other plants.

partial to these plants and one will ruin a large specimen in the course of a few nights. The very instant their visits are noticed search for and destroy the intruders at once. This Pteris is one of the best Ferns we have for cultivation in the window garden, and can be grown with excellent results by following carefully the directions here given.

CHAS. E. PARNELL, *Queens, N. Y.*

BETWEEN THE SURFACE.

Under the sod the flowers are sleeping,
Under the crust of sleet and snow ;
Never would stranger dream of the germs
Quietly resting so far below.
Nevertheless, from the brow of the hill,
To where the vale meets the silvery rill,
They trust, till the spring shall remove the chill,
Ready, they wait for the Master's will.

Under the snow there are dear ones sleeping,
Under this crust of sleet and snow ;
Never a word they send back to us,
Never a smile from the depths below.
Lying at rest, till the round years fill,
Till Time is checked and its wheels grow still,
Till called together from valley and hill,
They wait, to rise at the Master's will.

Under the crust of a lifetime's care,
Under the sleet and pelting storms,
In spite of the sting of pitiless blast,
Many a heart into beauty warms.
None ever look 'neath the frost and chill,
For the true heart waiting some niche to fill,
Where others are working with ease and skill,
So, in darkness it waits for the Master's will.

And we walk carelessly, numbering
Blossoms and beauty that greet our eyes,
Mourning our dead, who in silence slumber,
Counting those workers who bear off the prize,
And the blazoned names which the front ranks fill,
The crowned few on the top of the hill ;
We see not the heads that are bowed and still,
Willing, but waiting, their Master's will.

MRS. M. J. SMITH.

FOREIGN NOTES.

IMPATIENS.

The different varieties of Impatiens are thus written about by H., in *The Garden*: "Impatiens Hookeri, for some reason or other, is what may be called a shy bloomer; it has thick, succulent stems with a spur-like sepal. It is equally as fickle in ripening its seeds as it is in flowering in some cases, and, I believe, up to the present has set at defiance the many attempts of the busy hybridist to effect a cross or fertilize its flowers with success. It requires to be potted in a free and open compost with a fair amount of drainage in pots, using peat broken according to the size of the pot, with a little leaf-mold mixed with lumps of charcoal and sand. When the plants are growing they should be liberally supplied with water, and placed in a position to catch as much sunlight as possible without scorching the leaves. It requires no assistance by way of pinching out the points of its growth; if this is practiced, the results are not altogether satisfactory. After it has finished growing very little water should be given. Our plants, one of them a large one, bloomed in a house kept at nearly stove temperature in the Botanic Garden at Cambridge. *I. Sultani* can be had in bloom during the whole year, and well repays all attention bestowed upon it. It will grow in almost any kind of soil, and should be kept near the glass to prevent it being over-drawn up. *I. Episcopi* is similar to *I. Sultani*, and is said by some to be inferior, but it appears much brighter than *Sultani* by lamplight. *I. flaccida*, and its variety, *alba*, are both useful plants; the former bears purple flowers.

FORCING HERBACEOUS PLANTS.

A correspondent of *The Gardeners' Magazine* mentions the following named herbaceous plants suitable for forcing:

Anthericum liliastrum, *Astilbe barbata*, *Campanula persicifolia alba flore-pleno*, *Dielytra spectabilis*, *Lily of the Valley*, *Lilies of the old common white*, *L. candidum*, and the equally well known

L. longiflorum. "The best of all Lilies for starting early is *L. Harrisii*, which bears a striking resemblance to *L. longiflorum*. *Spiraea palmata*, although less useful than *Astilbe barbata*, is well adapted for forcing, and medium-sized examples have a very pleasing appearance when nicely flowered. Solomon's Seal is not particularly showy, but it is useful for associating with subjects bearing bright-colored flowers, and for furnishing sprays for dressing epergnes, especially for those which have tall, trumpet-like tops. In many instances two or three sprays will be sufficient for a tall, trumpet-like glass and the top of an epergne.

HYBRID POTATOES.

At the meeting of the Royal Horticultural Society, on the 12th of January, Mr. W. G. SMITH forwarded specimens of hybrid Potatoes obtained by the method of introducing plugs with eyes of one sort into other sorts. Dr. MASTERS observed that both botanists and gardeners had questioned its possibility, but that his own experiments, as well as Mr. SMITH's, had completely disproved the assertion. Mr. HENSLOW remarked that a gentleman in Warwickshire, twenty-five years ago, had tried it by binding together two halves of a red and a white Potato, and that the resulting produce was intermediate in color.

FERNS FROM SPORES.

A correspondent of *The Garden* gives the following as the way in which he has grown Ferns from spores: My plan is to sow the spores in a biscuit box, the soil being two inches from the top, and cover with a sheet of glass; the box stands on an old iron tray which is upon a table in the kitchen window, and every other night I fill the tray with boiling water, previously pouring off the old water. The best soil I find to be inclined to clay, mixed with one-third broken bricks, one-third peat or German moss, with a small quantity of burnt freestone bruised fine.

NEW HYBRID CALCEOLARIAS.

Some new varieties of Calceolaria have been produced at the establishment of VILMORIN & Co., seedsmen, of Paris, France. These varieties are the result of fertilizing the flowers of a plant of Triomphe de Versailles, a variety belonging to the shrubby Calceolarias, that have descended from *C. rugosa*, with pollen from some herbaceous varieties. This was in 1884, and the ripened seeds from this plant were sowed the same year, giving some plants which commenced to flower last year. The plants are described as very vigorous, shrubby, very branching, and forming strong, erect bushes, varying from twelve to twenty inches in height. The foliage is intermediate in appearance between the parent plants. The flowers, instead of being merely of shades of yellow, as in the varieties from *C. rugosa*, vary from pure yellow to blood red, often more or less spotted and shaded. Moreover, a pure yellow flower was an exception, nearly all being finely dotted with red or crimson. It is thought that these hybrids will prove particularly valuable, having, as they do, the hardiness of the *C. rugosa* stock, and the bright colorings of the herbaceous varieties. They can be propagated by cuttings. The interesting question now is, what will the seeds from these varieties produce? This is the commencement of a new race that may prove to be a great acquisition to florists.

FORCING HARDY PLANTS.

VERONICA, in *The Garden*, writes thus: Fancy having Daffodils and Chrysanthemums on one's table at the same time, a thing one never dreamed of as being possible a few years ago. The careful in-door culture of hardy flowers is, as yet, but in its infancy, and doubtless has many other pleasant surprises in

store for us. I hope the nurserymen of sunny Italy will grow all our good Daffodils by the thousand, and send them over here for gentle forcing at a reasonable rate. Grown in Italy, these bulbs would flower at least a month or six weeks before bulbs of the same kind grown in Holland or Belgium; so, also the bulbs of *Iris reticulata* and its forms, which would be lovely in pots along with that sweetest of early flowers, the White Roman Hyacinth and forced Lily of the Valley.

ASPIDISTRA LURIDA.

The following notes on the propagation of this plant are given by a writer in the *Gardeners' Chronicle*: "The way to propagate and increase this plant is to divide it by shaking it out, or cutting the ball or mass of roots through, as the plant spreads by sending forth creeping stems with crowns or eyes, from which leaves spring. Although the division may, with tolerable safety, be effected at almost any time, the best season to carry it out is in spring, just as the plants begin to shoot, as then they suffer little check, and quickly get over the disturbance. The soil most suitable to grow the Aspidistra in is a mixture of loam and peat, with a good sprinkling of sharp sand, and it is always advisable to keep the plants confined to small pots, as with their roots pinched they are sure to come better variegated, and remain in a healthier state when standing in pens or saucers to catch the drainage that runs through the balls. The potting should be very firmly done. After potting, the plants should be stood in a close frame or other situation, where they can be kept warm and have a moist air for a short time, just to give them a start, after which they will be safe, and may then be used for any purpose required."



PLEASANT GOSSIP.

AN IVY WITHOUT TRUE ROOTS.

Some six years since, a neighbor of mine had a fine English Ivy growing up on one side of the house and extending on the roof. For some reason he wished to clear the roof, but found one shoot had taken root under the shingles. He cut the vine down, leaving the small shoot rooted to the shingles. It has been growing there ever since, and now hangs over the eaves more than six feet. This seems the more remarkable as for nearly nine months in the year we have little or no rain, and suggests the thought that many plants may obtain more nourishment from the atmosphere than we are aware of. This circumstance has interested me very much, and I thought, perhaps, your readers might also like to hear of the experiment.

W. H. H. T., *San Francisco, Cal.*

This habit of the Ivy has frequently been noticed in England, but there the humidity of the atmosphere and the frequent showers and rains supply moisture, holding in suspension more or less nutriment ready to be appropriated by the plants through their aerial supports, or aerial roots; and experiments have been made there with plants deprived of their roots, but still clinging to walls, showing that nutriment was actually obtained by the Ivy in this manner. The case here mentioned is interesting, as the narrator states, from the fact of the dryness of the atmosphere.

CYCLAMEN—CACTUS.

I have a Cyclamen of my own raising, nearly four years old, that is now the third time in bloom, having on twenty-seven buds and blossoms, color dark pink. The bulb nearly fills a six-inch pot. I would inquire if the bulbs retain their blooming qualities for successive years?

I have a Cactus, a slip, obtained last April, it is called here the case-knife, or three-cornered, Cactus. Flowers large, bright scarlet; one shoot has made a growth of twenty-four and a half inches in height, and measures six inches in circumference at the largest place. Is not this a remarkable growth? From this description could you give the name? Does it require a large amount of sunshine, or will it bloom in partial shade?

L. E. C., *Norvell, Mich.*

Cyclamen bulbs are not usually kept after the third season of blooming, as they are then so much exhausted as to give afterwards only a few small flowers. A supply of strong bulbs can be kept up by sowing the seed every year.

The description given of the Cactus is

not sufficient to enable it to be identified. It is certainly a strong grower. The plant during the growing season should have a full exposure to the sun, but while in bloom if kept in a light shade, or at a north window, the flowers will last longer.

DRIED BLOOMS OF HYDRANGEA.

I have nowhere seen any notice of the flower bunches of *Hydrangea paniculata* for winter decoration as dried flowers, and a hint in relation to it may prove of interest and value to your readers. My bunches, and I have many of them, are as perfect in appearance to-day as when brought in from the lawn just before frost set in. The petals have neither shrivelled nor lost color, though perfectly dry, and the bunches are still in place and position as at first. As soon as I have leisure I shall attempt to color some of them with aniline solutions, and I hope thus to make them still more ornamental.

H. C. G., *Milwaukee, Wis.*

Our own experience corroborates this statement in regard to the large panicles of flowers of this *Hydrangea* taken off late in the season and before frosts arrive. The flowers dry, but retain perfectly their form and color, which at that time is a kind of purplish pink or lilac, and, in fact, the panicles bear a general resemblance to clusters of purple Lilacs. When set in vases without water, they remain unchanged in appearance for months, and so form a very acceptable winter decoration.

MEADOW IN DAKOTA.

I send you a sample of soil taken from my farm, that I would like you to test and see what would be most profitable raised thereon. The land is a little low, though high enough when the country is a little older, so that we can get the proper drainage in the spring of the year. I have been thinking some of seeding it for hay, but grass does not seem to do well in this country, or, probably we do not get the proper kind.

H. A. L., *Grand Forks, Dak.*

We should do the best we could for the present in the drainage of this piece of land by means of open ditches, and in the latter part of summer plow and fit it for seeding for meadow. As soon as possible after this preparation has been made we should sow it with a mixture, in equal parts, of Fowl Meadow and Kentucky Blue Grass. The seed will germinate

nate in spring. The soil contains a large proportion of vegetable mold, and when properly drained will be suitable for most kinds of farm crops.

DAPHNE-JASMINUM.

Will you please give me some information in regard to the treatment of Daphne odorata. My plant does not grow; it is one year old, and is the same size now as when I obtained it.

I have a fine specimen of Jasminum longiflorum, (grandiflorum?) three years old, but can obtain but very few flowers from it, although it is covered with buds. I set it in the ground in summer, and lift it in the fall before frosts. N. A. C., Oshkosh, Wis.

Without more exact knowledge of the condition of this plant of Daphne, we can give no directions specially for it, but the following general features of treatment should be observed: The plant should have a small pot, well provided with drainage, in the shape of broken bits of crock, or pieces of charcoal, and the soil should be light. Peat or leaf-mold should constitute one-half of the soil, the other half, a sandy loam; these well mixed together make a light soil that is agreeable to the plant. A heavy soil and insufficient drainage allows the soil to remain so moist as to be injurious to the health of the plant. A temperature of 50° to 65° is proper. Weak manure water can be given twice a week when the plant is in bloom.

We should judge that in the case of the Jasmine it is kept in too low a temperature, but there may be other unsuitable conditions.

ARTIFICIAL SUNSHINE.

In forcing plants for winter blooming the necessary warmth and moisture can be supplied artificially, but there is one "missing link" very essential to the development of perfect flowers on almost any plant, and that is sunshine. The question arises, can the rays of the sun be artificially produced? During January and February the days that the sun shines are few and far between. If during these months sunshine could be produced by the means of lamps and reflectors, or some such means, and thereby supply the plants with the necessary rays of light, and cause them to bloom in-doors while the blizzards are raging out of doors, a much desired object would be attained. Can it be done?

ED. HENDERSON, Lake Mills, Iowa.

It has been fully proved that electric light has the effect of sunlight upon plants, and can be substituted for it. The only barrier to its adoption is the expense. Possibly this difficulty may, in time, be overcome, and horticulture will then secure the aid of electricity in the absence of the sun in winter.

PRUNING HYDRANGEAS.

Will you kindly answer, through the MAGAZINE, with regard to the proper method of pruning the half-hardy or pot Hydrangeas. Should they be cut back, and if so, how much, and at what time? In purchasing a Hydrangea, last spring, I noticed numerous short stubs protruding from the surface of the soil, while every living branch had sprung directly from the roots. In reply to an inquiry, the florist said the stubs were the remains of last year's branches, showing where they had been cut back. He said they should be cut back to the soil every season after flowering, and as a result, be forced to branch directly from the roots. Hydrangeas so treated, he said, never become destitute of foliage at their bases. The Hydrangea which I bought of him, although well grown and having large root development, failed to attain sufficient maturity to bloom last season. Now, if I pursue the same course of treatment it has already received, cut it back to the pot before it starts into growth the coming spring, will it ever arrive at a blooming condition? This is an open question with me. Will you be pleased to inform me upon the subject.

MRS. A. F. G., Worcester, Mass.

Do not cut all the stems back, but if they are too numerous, and so will crowd each other when in full foliage, cut away as many as necessary, leaving a sufficient number to bloom. After blooming, the old stems can be removed, leaving the young ones for next season's flowering.

BEGONIA BUDS DROPPING.

Please inform me, through your MAGAZINE, why some of the buds on different kinds of Begonias fall off, and others mature? Is it a feature of the plant to develop only the fertile flowers, while the sterile ones fall at different stages of development? Do they fall from a fault in watering, or too much sunlight?

M. A. F.

There is a difference in the different varieties of Begonias about dropping some of their buds. The buds that fall are usually staminate ones. As might be expected the pistillate flowers retain a semblance of themselves longer than the staminate buds, but in most varieties the staminate flowers are the most showy. Fewer buds drop prematurely on strong than on weaker plants.

AMARYLLIS-POINSETTIA.

Will you give a description of Amaryllis Prince of Orange, in the MAGAZINE; also, A. oriflamme?

When is the best time to take cuttings from Poinsettia? Will it root after resting?

MRS. H. M. P., Grand Rapids, Mich.

A. Prince of Orange is a large flower of a bright orange color. Oriflamme is white, with large salmon-red colored bands, somewhat darker in the center; a large and well-opened flower of splendid shape.

Cuttings of Poinsettia can be made from June to September.

THE WINDSOR BEAN.

Year after year you say, in your Catalogue, that the English Broad Windsor Bean is not well adapted to our climate, and this for a long time deterred me from trying it; but an acquaintance has raised fair crops for many years and gave me some, and for the past two years I have raised them, and they yielded well and were very good. No fault could be found with them, except they were not quite as large as they grow in England. This is in the latitude of Rochester, and not more than a hundred miles distant, as the crow flies, that is, Erie County, Pennsylvania.

J. L. T.

This variety here is so shy a bearer as to be worthless, and it is, also, very subject to mildew. We are glad to learn that it does well, as here reported, and shall be pleased to hear from other localities concerning it.

KEEPING GLOXINIAS.

After my Gloxinias were done blooming I withheld water, and put them in a dry and moderately warm place. On examining them, in December, I found that nearly all of them had rotted with a dry rot. Please state what was wrong in my treatment, and oblige,

AN OLD SUBSCRIBER.

The place where these bulbs were kept was probably too warm, and the bulbs were kept too dry. We keep ours perfectly by packing them in leaf-mold containing a moderate amount of moisture, and placing them in a room where the range of temperature does not vary greatly from forty-five degrees.

DRAINAGE MATERIAL.

Will you please tell me, through your MAGAZINE, whether or not coal ashes would answer for drainage in boxes in which I intend to cultivate some flowers the coming summer? If so, please tell me how deep the drainage should be. The boxes are two feet long by one and one-half feet wide, and ten inches deep. If the above will not do, please suggest something that could be easily gotten in a city.

E. W. R., Philadelphia, Pa.

Coal ashes is a poor drainage material, but the coarse slate and rubble that remain after sieving coal ashes will do very well. Two inches in depth of this at the bottom of the box would be sufficient.

SHADING PLANT HOUSES.

The following I think is a cheaper and more desirable preparation than whitewash for shading small plant houses or conservatories. It consists of gasoline and white lead. For a small conservatory, take a quart of the gasoline, add a lump of the lead about the size of a hickory nut, stir till dissolved. Throw a little

on the glass either with a syringe or a common paint brush. If it does not make a dense enough shade, add a little more lead. If too dense, a little more gasoline. In sections of the country where the temperature in summer frequently runs above 90°, or for shading Fern houses add a little ultramarine blue, such as the kalsominers use, which will give the conservatory an ornamented appearance. Be sure to get the ultramarine blue, that which comes in form of a powder, and costs about 20 cents per pound, and is a dark blue; 5 cents worth, however, will go a long ways in the shading. Conservatories which are frequently built more for ornament than the requirements of plant life, are usually narrow and high, with a large amount of glass exposed to the sun's rays. In sunny weather, in March, the heat becomes intense, and to admit air enough to moderate the temperature without a draft, which is detrimental to most plants, is next to impossible. If just enough of the gasoline and lead to be discoverable on the glass is applied about March 1st, the labor of watering and airing will be materially lessened.

As this shading is more tenacious than whitewash, it should not be applied later than August 1st. It will then wear off gradually and leave the glass ready for winter flowers. A good stiff brush will remove it rapidly from the sides and ends, if it still remains late in the season.

People throughout the Northwest have lost many of their plants this winter. Lowest temperature that I remember of seeing here was 22° below zero, with plenty of wind. Hardy Roses and shrubbery will doubtless suffer severely.

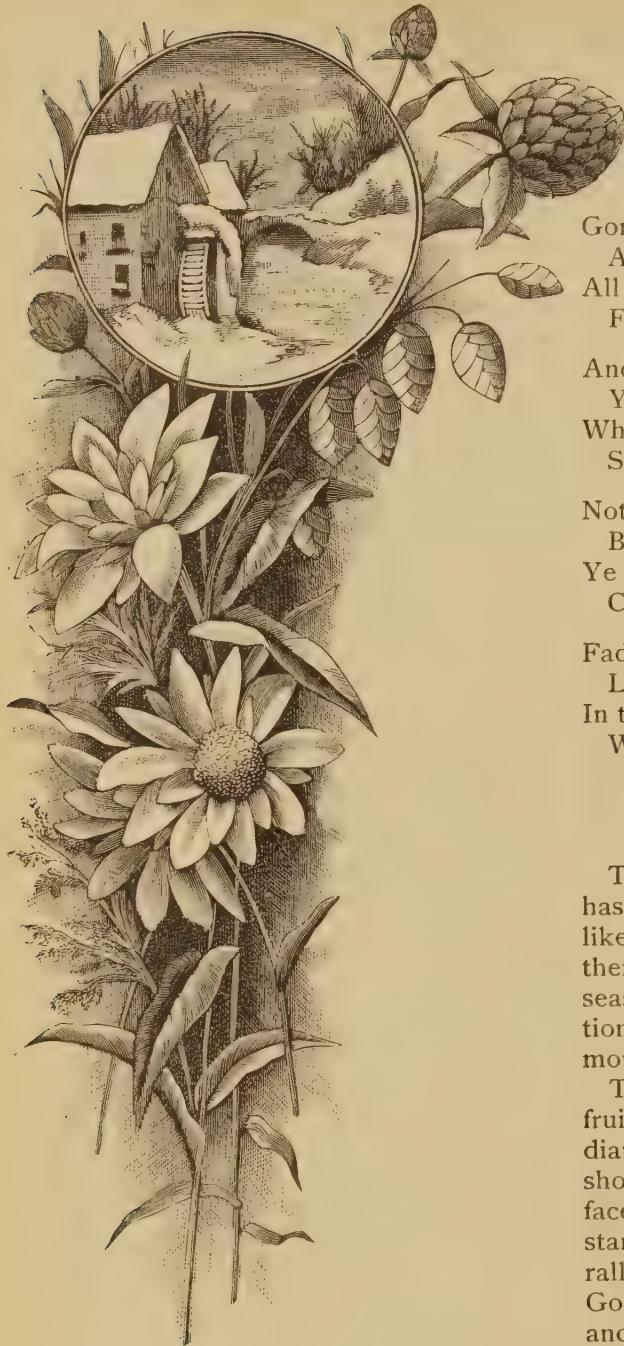
LEVANT COLE, St. Joseph, Mo.

FLORAL LANGUAGE.

O, lovely flowers, that, looking up to me,
Reveal the beauties of the floral train;
Moistened with dew that, soft as summer rain,
Impearls thy faces till they laugh with glee.
O, perfumed Violets! blue as summer sky;
O, Pansies; peering out from hoods of gold,
Lovely as dreamy glimpse of heaven!—I fold
You to my heart; ye glad my weary eye.

I breathe the odorous fragrance of thy bloom,
O, Heliotrope, so subtle that my sense,
My thoughts, my very being seemed to hence
Depart! Flowers for the bridal and the tomb!
Rose-buds and Calla—silent still—O, what say ye?
“We know not death; we bloom perpetually.”

LILLA N. CUSHMAN, Ansonia, Conn.



ROSE PRIDE OF REIGATE.

This variety, a sport from Countess of Oxford, originated at Reigate, England, two or three years ago. Last July a first-class certificate was awarded for it by the Royal Horticultural Society. Like its parent, it is of a good globular form, and a pleasing light crimson color, but this is strikingly diversified by regular pure white stripes through the petals, giving the bloom a remarkable and beautiful appearance.

FADELESS AMARANTHS.

Ruthless seemed the hand that plucked thee,
Amaranths, in all thy prime,
When the earth was gay with flowers,
In the golden summer-time.

Gone the halcyon days of summer,
And cold winter holds his sway;
All the garden beds are dreary,
For their charms are passed away.

And of all their beauteous blossoms,
Ye alone to us are left.
Whilst we prize thee still more highly,
Since of other blooms bereft.

Not alone in summer weather,
But in wintry storms as well,
Ye are bright and fair as ever,
Casting over us thy spell.

Fadeless Amaranths! thy blossoms
Life immortal signify.
In the glorious hereafter,
We, like thee, shall never die.

HANY.

HOW TO PLANT A TREE.

The proper method of planting a tree has been so often described that it seems like an idle tale to rehearse it again; but there are some it may benefit, and it is seasonable, so here is E. P. ROE's description or direction, as published in this month's issue of *Harper's Monthly*:

The hole destined to receive a shade or fruit tree should be at least three feet in diameter and two feet deep. It then should be partially filled with good surface soil, upon which the tree should stand, so that its roots could extend naturally according to their original growth. Good fine loam should be sifted through and over them, and they should not be permitted to come in contact with decaying matter of coarse, unfermented manure. The tree should be set as deeply in the soil as it stood when taken up. As the earth is thrown gently through and over the roots it should be packed lightly against them with the foot, and water, should the season be rather dry and warm, poured in from time to time to settle the fine soil about them. The surface should be levelled at last with a slight dip toward the tree, so that spring and summer rains may be retained directly about the roots. Then a mulch of coarse ma-

nure is helpful, for it keeps the surface moist, and its richness will reach the roots gradually in a diluted form. A mulch of straw, leaves, or coarse hay is better than none at all. After being planted, three stout stakes should be inserted firmly in the earth at the three points of a triangle, the tree being its center. Then by a rope of straw or some soft material the tree should be braced firmly between the protecting stakes, and thus it is kept from being whipped around by the wind. Should periods of drought ensue during the growing season, it would be well to rake the mulch one side, and saturate the ground around the young tree with an abundance of water, and the mulch afterward spread as before. Such watering is often essential, and it should be thorough.

MARCH WORK.

The present month is one of great activity in the garden. Although, at the north, March is a winter month, yet it is one in which much work must be performed. At the south vegetation is already active, or considerably advanced. The pruning of vines should be completed as soon as possible, and all pruning for the purpose of increasing the growth or vigor of trees should be done at once. The preparation of the soil and transplanting of trees and plants will now go on actively, as well as the sowing of early crops. Peas and Onions are two crops that require the first attention. Cabbage, Cauliflower, Celery, Tomatoes, Radishes, &c., will be sown at different times through the month, either in hot-beds or the open air, according to latitude and climate. Many kinds of flowers raised from seed that can be hastened into bloom by starting in the frame, greenhouse or window, will now receive attention. Among these are the following: Ageratum, Amaranthus, Alonsoa, Antirrhinum, Aster, Balsam, Canna, Cobœa scandens, Cockscomb, Ipomœa, Chinese or Japan Pinks, Lobelia, Maurandya, Myosotis, Mimulus, Nemophila, Portulaca, Pansy, Phlox Drummondii, Petunia, Salpiglossis, Schizanthus, Ten-Weeks Stocks, Tropæolum, Thunbergia, Zinnia, &c.

If the ground is dry and otherwise in good condition, sow Sweet Peas—these should never be delayed longer than is absolutely necessary. In the greenhouse

many young plants will require to be shifted, and others to be potted from the cutting-beds and seed-pans. Care must be taken to give plenty of ventilation in fine weather, both to the greenhouse and frames, as the sun is getting high and exerts great power.

New lawns can be seeded as soon as the soil is sufficiently dry to rake fine; the sooner the seed is sown and the ground rolled the better, for it should have all the benefit of the cool weather of spring, as roots will make faster then than when it is very warm.

Even at the north we should push all the work that can be performed this month, as the great bulk of open garden work, ground preparation, seeding and planting will be done next month. One point may well be kept in mind—a crop can never be hastened by early sowing or planting on wet soil.

GARDENING IN COLONIAL TIMES.

The following excerpts from a very early American paper, *Boston Gazette*, 1770, which I happened on here at the antipodes, in the Melbourne Public Library, may be interesting to some of your readers. The first is an advertisement: To be sold by Geo. Spriggs, gardener to Jno. Hancock, Esq., a large assortment of English Nut trees, grafted and ungrafted, enumerated at length. This is followed by the announcement that Abigail Davidson, about the middle of Seven Star Lane, Boston, is prepared to sell English Seeds; Pease, Beans, &c., giving a long detailed list of almost every known vegetable or herb, together with a number of flower seeds. Now American seeds and agricultural implements are common all round the world.

S. W. V.

THE PORTFOLIO.

All who receive the Portfolio, or the plate of Roses and Pansies, freely offer their praise of the workmanship. We feel that we are encouraging pure and refined tastes in sending out these beautiful plates, and we only wish that they might go to the homes of all our readers. We hope all who have not yet seen these plates will read again our offer of them for a club of subscribers. If you have sent in your name singly, it can count as one of the club by getting three others.

FLORAL GOSSIP.

If persons having bay windows only knew how much better plants grow in them when they can be shut off from the living-room by glazed doors, I am sure they would soon have it arranged so that the plants can be kept by themselves, when it is desirable to do so; by that, I mean, of course, in an atmosphere of their own. If the bay window opens off the sitting-room or parlor, with nothing but a thin curtain between them, as is generally the case, the air in both must be pretty much the same, and it is safe to say that the air in the room will be too warm and dry for plants to grow in healthily. By putting doors between the room and the window, this can be remedied. The plants can be sprinkled daily, after which the doors can be closed entirely, or nearly so, as the condition of the weather may make advisable, and the air among your flowers will remain moist for the greater part of the day. If it were not for these doors the dry, overheated air of the adjoining room would soon make way with the moisture which a thorough sprinkling would produce. In such a window you can keep your plants free from the dust which always comes from sweeping. They are not only very much healthier, but they look brighter and cleaner. The expense of doors is not large, and any carpenter can hang them. Instead of having two wide doors, which would take up too much room when partly opened, I would have four narrow ones, hanging the two inside ones on the two which are attached to the casings. These inside ones can be hung on the others in such a manner as to fold back against them.

I have a double Geranium, Jewel, which I bought nearly four years ago, and during that length of time I am confident that it has not been entirely out of bloom more than twice. It is quite as constant a bloomer as any of the single varieties. Of course, its crop of flowers is larger at some seasons than others, but it intends to establish a reputation as a steady bloomer, and it has done so with me. The flowers are of a rich crimson, slightly marked at the base of the upper petals with violet. They are very double, open well, and remain in good condition for a long time. The trusses are of average size, and borne on long stalks, well

above the foliage. The plant is greatly given to branching, and therefore has plenty of flowering surface. My plant—the original one—is stocky and vigorous, and has required but very little training to induce it to grow in good shape. I have frequently counted over a dozen clusters of flowers on it at a time, during the winter. Unlike most Geraniums, this variety does not seem inclined to rest. I have given it opportunities to do so, but it has never availed itself of them. I keep it in a pot the year round. I have one other double variety, La Negre, which I expect flowers from in winter, but all the other double ones are worthless, with me, for winter blooming. Like most varieties of the Fuchsia, they are summer bloomers, and I would not advise any one to waste time on their cultivation in the conservatory or window garden in winter. Better give them a place in the cellar, and let other plants which can be made to bloom in winter have the space they would occupy.

Certainly, one of my prettiest plants is the Paris Daisy. It may not be the showiest, or the most striking, but it has a quiet, modest sort of beauty which makes it a favorite with me. It has some of those qualities which make many of our common flowers lovable. We may not admire them quite as much as we do a Night-Blooming Cereus, or a Rose six inches across, but we like them better. They are more companionable. Last summer I sunk the pot containing this plant in the ground up to its rim, and cut the entire top back to within six inches of the main stem. Very soon new branches began to break in great profusion. When I brought it in, the last of September, it was three feet high and as many across, and had grown into a compact, symmetrical shape. Its pretty, bright foliage is very pleasing in itself, and forms a good ground to display its blossoms against. The flowers are exactly like the ordinary field Daisy, only larger. They are produced in great profusion. I have cut a great many this season, without seeming to rob the plant, there being so many that a handful is not missed two or three times a week. They are much sought after for bouquets for party wear. The plant is one that requires a good deal of water at the roots, I find, and if you want fine flowers, and a

constant supply of them, you must not allow it to get dry. If you do, the buds will be pretty likely to blast. I give a weekly watering with some fertilizer, Plant Food, generally, that being as good as anything I know of, and most convenient to use.

"A LITTLE SUMMER ALL SHUT IN."

" How sweet to come from the constant din
Of life's contending tide,
To my little summer, all shut in,
From the frozen world outside;
To watch the bright Geraniums grow,
From the bud to the opening flower,
While the outer world lies under the snow,
And bound by the Ice King's power."

The above quotation fills my mind on entering my little greenhouse. Many of the plants are in full bloom, while great trusses of buds promise more, if the sun will only show his face long enough to inspire them. In a little "offset," made to secure a lower temperature, the wealth of bloom is surprising. A thrifty Azalea Prince Albert, crowned with clusters of buds and several perfect flowers, is beautiful in contrast with an immense Bridal Rose bending under the weight of its lovely, delicate white Roses.

As a background to these, and interspersed among them, are several varieties of Fuchsias, their pendant branches tipped with bud and bloom, the gem of the collection a large, well grown specimen of serratifolia, literally hidden in bloom.

On shelves, arranged one above the other, and near the glass, are seventy-five healthy Primulas, enjoying their last potting and rewarding me for patience in growing them from seed. They are all in bud and bloom, one-third of them being double, and all of distinct, clear colors, not one "muddy purple" in the whole lot. The single ones have a lovely, clear citronella eye, several unusually fine "fern-leaved."

In the main house, separated from this room by a door, are Geraniums, all colors and kinds, in full bloom. These were selected from a large number, none but the best being retained. All interested in cultivating this genus should read VICK'S MAGAZINE and learn how to secure plants worth the care they require. My success is due to this fact.

Begonias of sorts, Roses, Abutilons,

Lantanas, Euphorbias, Violets, Heliotropes, Daisies, &c., and many bulbs, the chief attraction just now being a large pot of Freesia refracta alba, are lending their fragrance and beauty to this lovely "little summer all shut in."

J. P. C., *Newport, Ky.*

CALIFORNIA GLEANINGS.

On the 28th of January, this year, there was cut down in the city of Oakland, Cal., a Eucalyptus Globulous, or Blue Gum, as it is commonly called in that state, which was planted early in the "fifties" by Rear Admiral McDUGALL. This tree was probably the oldest tree of this species in the United States, and had attained a height of nearly a hundred feet, and was four feet eight inches in diameter at the butt. In the same city, there are many specimens of Blue and Red Gums, not as old as the above, but far taller and of stately proportions.

In the vicinity of San Francisco tobacco plants grow from year to year without being killed by the frosts. A correspondent living at North Temescal, a village of the foot hills, three miles from the Bay of San Francisco, and directly opposite the Golden Gate, writes that, for years past he has had tobacco plants in flower every month of the year; that in December and January the leaves are as large and the flowers as plentiful as they are in the summer.

We learn from the same party, Wm. A. PRYAL, of N. Temescal, Cal., that around Oakland, Cal., the nurserymen are giving special attention to the growing of Roses, both for the plants and for the flowers for the San Francisco market. In some parts of the foot hills between Oakland and Berkeley, there are nooks where Roses bloom profusely during the winter, and Rose growers are taking advantage of these spots, and are setting them out to Roses and other plants usually kept under glass for forcing the flowers for the Christmas and New Years' supply of cut flowers.

It has become a common practice for persons in California to gather a bouquet of flowers from the open ground during the season that all open-air flowers are unknown in the east, and send them to their friends across the continent. It is believed that in a few years California will be sending car loads of flowers to

the eastern states as she is now sending her trains of beautiful fruits.

A friend in the Golden State writes us that turkeys in that State are very fond of eating the capsules of tobacco. This reminds us of the rhyme children often repeat:

"When pigs were swine,
And turkeys chewed tobacco," etc.

Verily, California turkeys are learning exceedingly low habits, and we hope they won't come east and introduce the habit among our eastern fowls. Just think of eating a turkey at Christmas so highly flavored with tobacco that you cannot taste the nice stuffing and cranberry sauce.

Horticulturists in California have, during the past five years, been giving considerable attention to experimenting with the fruits of Japan, and so far they have achieved quite flattering success. The Japanese Persimmons bear wonderfully well in that State. A correspondent writes that he has seen trees a few years old, and not more than four or five feet high, completely loaded with large golden fruit, which appeared like Oranges. In December, when the trees are leafless, and this fruit is still clinging to the stems, one would take them to be Oranges clinging to a tree that had, through some unknown cause, lost its verdant foliage. So far, although the trees bear heavily, and there is plenty of fruit on the market to make it reasonably cheap, there is but a poor sale for this fine fruit. The cause of this is, no doubt, owing to the people not knowing what the fruit is, nor the excellency thereof. It will take some time to inform the public what the fruit is. Most of those who raise Japanese Persimmons in California are drying the fruit with gratifying success.

Nearly a dozen varieties of Japanese Plums are now being tested, and, so far, nearly all of them give satisfaction, in fact, they surpass the older and well known kinds. One of the first brought to the notice of the public is what is called in California, the "Kelsey," which is the largest, so far produced there. It is a fine, large shipping Plum, and of good quality. Being red, it is not sought after by the canners. A. D. PRYAL, one of California's pioneer nurserymen and horticulturists, is disseminating some fine, light colored Plums, and of excellent quality. Most of the Japanese Plums are rapid growers, often making

six feet of new wood a year. The "Kelsey" retains most of its foliage all winter, and in December and January is often covered with flowers. Although it blooms so early it does not ripen its fruit till late in August or in September. Probably the early blossoms do not set, but those that follow in the spring do. We have the promise of photographs of several varieties of this fruit next fall, and shall probably illustrate them in these pages.

EUROPEAN NOTES.

A steamboat ride on the Rhine from Coblenz to Bingen is fairly intoxicating, especially if the time of year is October, when the foliage has all turned to dusky browns and warm, deep reds. None of the bright, startling scarlets of our Sumach and Maples are to be seen. All the coloring is rich and subdued, with age, perhaps, like the paintings by the old masters. That day could well serve as an almanac for a year, since it sampled every change of weather imaginable, with the exception of an actual thunder-storm. Yet the exception should hardly be made, for nothing was wanting but the lightning and the rumbling to make it a genuine July storm. Not only did we have rain, however, we had bright sunshine as well. Now it was cold, and again it was warm, a furious wind, and soon a dead calm, drifting clouds and a soft blue sky. The red-brown heights combined with the swift moving clouds to give us every conceivable tint and play of light, until the castles, gloomy and mysterious, appeared one after another, now brightened up by a flood of sunshine and, in a moment, rendered almost indistinguishable by the blue-black mantle. It seemed as if Nature did her best to give us every opportunity possible, to make our one day equal a dozen.

But numerous opportunities bring with them perplexities, and one hardly knew at which to gaze longest—the castle on the height or the quaint little village below it. The curious, steep-roofed houses and narrow streets absorb one's attention so thoroughly that one has hardly time to trace out the remains of the old Roman wall which the guide-book assures you is still to be seen. A guide-book, although necessary, is a very importunate companion. You feel almost obliged to read the legends and tales while passing

their birth-places. Yet it is quite as satisfactory, after all, to feel that you are in the midst of the legendary, as it is to know the particular spot.

Soon the vineyards began to appear. It was so late in the season that nearly all the fruit had been gathered, though there were occasionally a few old women visible among vines perched upon such steep slopes that it was a wonder how they got there or the vines either. The vineyards are so different from those in America that one not expecting to see them would hardly dream of their being vineyards. Each vine is trained on a small stake about three feet high, and as they are not more than two feet apart, the effect is that of a miniature hop-yard. The much celebrated Rhine-wine is produced near Bingen, and here the lower lands allow large areas of unbroken vineyard. Here, also, are beautiful country houses and villas standing in the very midst of vines. They are on all sides, not even is a space in front of the house sacred to anything but Grapes. But long before this point is reached, however, every available place is utilized. Every spot, in which a root will grow, has its root. There are irregular spaces, perhaps a dozen vines here and fifty there, and no visible boundary separates one man's domain from another.

It is curious, also, to notice that the people all live in villages. There are no single houses standing alone on the country roads. They are all huddled together as closely as possible, and the peasants go out each morning to work their land which often lies a mile or two distant. The land is divided into infinitesimally small plots, and it is almost incredible that a person, who has one of the smallest, should own anything. Many are not larger than good sized flower-beds. The different stripes are so varied in color and so accurate in outline, that the whole cultivated portion, looks like a patch-work quilt in which the pieces are long and narrow rather than square.

That many of the peasants are very poor can well be imagined. Yet it was an odd sensation, to be in a foreign land, and hear, for the first time, that America is injuring Germany more and more every year. It sounds quite different to hear that statement made here, and realize it only in a dim sort of a way at home.

American grain finds its way into Germany in such quantities that the native industry is much depressed. And it is so not only in agriculture, but manufactures also. Here, in Zürich, the great silk mills which used to send enormous quantities to the United States, have suffered extremely, since America has made such progress in silk manufacture. Zürich hopes soon, however, to find another market in South Africa. So many Swiss have gone there in the past few years that Switzerland is said to have twenty-three cantons, twenty-two here and one in Africa.

H. M. S., *Zürich, Switzerland.*

WINTER VEGETABLES.

Where we have long winters gardeners always try to keep the table well supplied with vegetables. In December, having noticed some Turnips stored for winter use, and sprouting, my mind was aroused to the fact that they would be useful vegetables if forced. I at once commenced working out the idea. Having a dark corner in a warm greenhouse, I placed on the floor, two inches of sand, and then set out Turnips close together, and gently pressed them into the sand; after which I gave them a watering, and closed them up. In about ten days I had my heart gladdened by beautiful blanched leaf-stalks. A bundle of them was cut, as much as would make a dish for twelve people, tied up as Asparagus is, and sent into the kitchen. It was cooked the same as Sea Kale or Asparagus, and when placed upon the table it was pronounced "excellent." It may be well to say that any cellar that excludes frost, is suitable for forcing or growing Turnips in this manner. Housekeepers can have a very delicious vegetable all winter by planting at intervals. Any kind of Turnip may be used.

Kohl Rabi, may also be esteemed as a winter vegetable, although some raise it only for summer use. I manage by sowing in the spring in a cold-frame, to have nice young plants to handle early. I transplant them from the seed-bed into rows, say thirteen inches apart, and allow them to stand until after they have been well frozen, then take them up and store the same as Cabbage.

The Drumhead Savoy, I consider one of the most important of winter vegetables, as it answers two purposes, first,

as a Cabbage, to be boiled, which is much sweeter than the ordinary Cabbage, secondly, as a beautiful, sweet, salad Cabbage when cut and dressed same as Endive.

Perhaps few are aware that the Leek is one of the finest winter vegetables, and when properly grown can be had from one foot to a foot and a half of white which, when boiled, is very nutritious, and much milder than the Onion. With Beets, Carrots, Parsnips, Artichokes, Salsify, Celery, Celeriac, Brussels Sprouts, Leeks, Turnips and Cabbage, all carefully put into a root cellar, we are prepared to give change of vegetables all winter as well as summer. G. HUNTER.

OFFSHOOTS.

Will the government of this country expend hundreds of thousands of dollars on its Bureau of Agriculture for the promotion of the greatest industrial interest of this country, and yet prohibit by a high rate of postage the dissemination of roots, seeds, plants and scions among the people? A bill is now before Congress, proposing to double the present rate of postage on these articles.

A correspondent who had some Ten-Weeks Stocks that did not bloom in the garden, potted them, and last month wrote that "some of them have been in constant bloom for two or three months, the most lovely colors, and in the evening very fragrant. Another season I shall have many more of them, as I think they are one of the best plants for the window in winter."

T. S. HUBBARD, of Fredonia, N. Y., made the remark at the meeting of the Horticultural Society here, in January, that if any profit is to be made in this State from vineyards, it is time to stop

planting vines. Perhaps nobody knows better the extent and condition of the vineyards of this State, and it will be well to accept his remarks as a warning.

For fixing or holding the surface of embankments of light soils, there is nothing better than the Double Poppy. Scatter the seed over the surface, and it will germinate in a few days, and in two weeks its roots will begin to hold the soil, and will finally interlace, forming a strong net-work. The plant seeds itself after the first year.

"Her Majesty," says the *Gardeners' Magazine*, "is probably the finest new Rose within the experience of modern rosarians, and, in any case, it is distinct, sumptuously beautiful, and has a constitution and character properly corresponding to its name." In which case, long live Her Majesty.

The same journal has this: "There is no more hideous burlesque of our achievements in science than the overhead wires that disfigure every scene, and to the apotheosis of the Ugly Devil add an appropriate menace to every human life."

The Japan Chestnut is said to be a low-growing tree, bears often in three or four years after the young tree is planted, nuts not so good as our native Chestnut, but larger. The tree is hardy, and is attracting some attention in this country.

In order to keep up a good supply of Strawberries for the family, do not forget to make a new plantation this spring, and plant early.

The American Exhibition to be held in London has been postponed to the 2d of May, 1887.



OUR YOUNG PEOPLE.

A LOOK INTO A BEE-HIVE.

PART II.

"Oh, see what a shiny black bee," said little Daniel, making an effort to point with his elbow, his hands being in his pockets.

"Yes," said Uncle Charlie, "that is a robber bee. See how quick it darts away when another bee comes near it. There! one bee was too quick for it, and has caught it by the leg. See how it struggles to get free. Ah! it has broken loose and is gone. It is probably an old hand at the business, and its shiny appearance is due to the fact that the feathers or down have been rubbed off of its body, possibly by crowding through narrow places in its efforts to steal." "Does the robber bee belong to this hive?" asked Ralph.

"Oh, no, it belongs to some other colony, possibly this one standing next, possibly it come from some hive a mile or two away."

"How can the bees tell it from their own bees?" said Grace.

SECTION BOX, WITH FOUNDATION STARTER.

"I don't know," said her uncle, "possibly by the smell. At any rate the bees seem to have little difficulty in distinguishing a stranger. I have known two colonies to be put into the same hive together, and every bee of the last colony to be stung to death by the others. But I want you to notice whether there is any difference in the color of the bees."

"Yes, sir," said Daniel, "some have more yellow color on them than others."

"Yes, a colony of pure Italian bees will have all workers with the first three rings or segments of the abdomen yellow. The common black bee has no yellow. This colony is a mixture of black and Italian. They are called hybrids. Not many years ago there were no Italians in this country, although now there are a great many, and Italians and hybrids are considered superior, generally, as honey gatherers. Great pains are taken to have good stock,

and quite a number of men make their principal business raising queens to sell. Thousands of queens are sent every year, through the mails, in little cages, with a few worker bees to accompany them. Importing queens from Italy is also quite a business. Yonder hive contains a queen which was hatched under the sunny skies of Italy. I paid six dollars for her."

"How can the bees tell their own hives?" asked Ralph. "The hives all look alike."

"I'll answer you presently," said his uncle, as he finished closing up the hive they had been inspecting. Then he went along some distance, looking at the different hives, till he came to one where he said, "Now watch the bees flying in front of this hive."

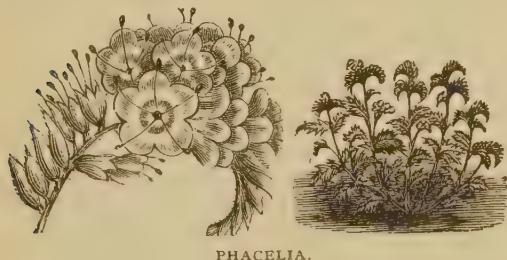
"Why," said Grace, "there are more bees than at the other hives, and they just keep flying in sort of circles and not darting in and out as they do at the other hives."

"I don't know," said her uncle, "that there are any more of them, but the way they fly about makes them look so. Just fix your eye upon one bee as it starts out of the hive. Instead of darting, like the bees of other hives, straight out of the hive as if the whole family were sick and it were sent for the doctor, it comes bustling out of the entrance, shaking itself and running about on the alighting board with a very important air, as if to say, 'I tell you, it just needs me about, to have things go right,' and then when it takes wing it flies slowly a very little way from the entrance going in circles a little farther and farther away, keeping its head constantly turned toward the hive. These are young bees having a play spell, and they fly thus carefully with their heads toward the hive to mark the location, apparently trying to fix in their little heads the position of surrounding objects. Ever after, they seem to fly back to that same location on returning home, and if their hive is moved away, only a few feet, they will never find

it, but fly around and around the site of their old home, in a dazed sort of way, perhaps finally entering one of the nearest hives, where they are likely to be kindly received, providing they enter well laden."

"Do the bees get honey from all kinds of flowers?" asked Grace.

"Oh, no. Among the principal honey plants are fruit trees, White Clover, Linden or Basswood, Buckwheat and quite a number of others. But of the plants cultivated for their flowers there are comparative few that bees work on. Mignonette is quite a favorite with them. A beautiful modest little blue flower which they work upon is not generally so well known as it should be. It is the Phacelia. Thirty



years ago I knew it kept as a house plant under the name of Heliotrope. The flower somewhat resembles the Heliotrope. If my memory serves me correctly, it was quite fragrant when kept in a pot in the house, although when grown in the open air it is without fragrance."

"How do they get the bees to make the combs of honey so true and straight?" said Grace.

"The bees don't make 'em at all," volunteered Daniel. "Emma Wilson said there was a man at their house that told them all about it, how it was made by

machinery and there were no bees about it."

His uncle smiled good humoredly and approaching a hive, said, "You notice that this hive, like most of them, is higher than the one we had open. Those upper stories are called supers." Uncovering it, he carefully drew from it a little box or section of beautiful comb honey, white as snow, and as straight and true as if it had been made to order.

"There," said he, "there are twenty-three others just like it in the super, which is about ready to take off. No art of man can make anything to equal that, although a foolish story has been going the rounds of the papers to that effect. The fact is, that no comb honey has ever been made by anything but bees, and probably never will be. Mr. A. I. Root, a good friend of the bees, and publisher of a magazine devoted to bee culture, has made a standing offer of \$1.00 to any one who will tell him where comb honey is manufactured without the agency of the bees. The principal secret of getting these little sections so neatly filled, is in getting them to start their combs at the right place. This may be done by fastening in the section a starter of empty honey combs, or more commonly of comb foundation, which you see on this next hive. Comb foundation is simply beeswax made in very thin sheets and pressed so as to be just like the septum or middle wall of the comb made by the bees. If no starters are used the bees will store just as good honey, but they will build it crooked in all sorts of shapes. But there comes Aunt Sidney to call us to dinner."

C. C. MILLER.

S. K. C.

"I do wonder what in the name of common sense those girls call their society!" exclaimed Fred. Slater to Clarence Spencer, as their sisters met them on the street. "Such a parade as they do make of those initial letters appended to their cards and signatures! 'S. K. C.' What *can* they stand for? You know Grant Wilbur's birthday has passed without his winning the promised premium. Whose birthday comes next?"

"Mine does. The society meets at our house this afternoon, and so I've given Irene my second list of guesses to hand in. You ought to have seen the lofty

scorn she feigned when she read some of them. She said at that rate they'd have a fine showing when the lists are all recorded in their 'Blue Book.' If it wasn't for the *K.*, I'm sure we could guess it; but that is a poser."

"Let's have some of your titles."

"All right. Let me think; I had it 'Society for Keeping Christmas,' 'Society for Kindness to Children,' 'Society for Kitchen Classics,' and 'Society for Killing Cats.' Last week I had 'Secret Kindergarten Club,' 'Social Knitting Club,' 'Society for Kindling Curiosity,' 'Society for Key-hole Chronicles,' and

'Society for Kissing Chaps.' O, but that last one made Irene huffy! She said it shouldn't go into the society at all—she wouldn't be so disgraced; that she'd have me understand that they carried on solid business, (the idea!) and didn't deal in nonsense, and that their society just scorned boys anyway, though, of course, they had to behave properly to their own brothers outside; but not a boy could compete for the birthday prize unless he had a sister in the society. O, but she got roused! She said they all declared they had to suffer enough from their brothers' tormenting ways at home, and that even the lists that had been handed in thus far showed, plainly enough to all, the spirit of teasing and fun-making that each had to contend with."

Then these two unfeeling boys laughed and shouted, as though nothing could be so delightful as this condition of things.

Not long after this conversation Irene Spencer was saying to her mother:

"There will be some reading this afternoon that I would like you to hear, and I'll call you in time for it."

"May I not be present from the first?"

"O, no! all the faults and failings of members at the last meeting are read up from the 'Blue Book.' They are all the records we keep, except the lists of 'guess'-names the boys send in. And some of those, mother, are perfectly ridiculous; the girls nearly go into conniptions over them. But don't tell Clarence. Of course, the boys think that sort of thing is very cute. But I was going to explain that at our last meeting, St. Valentine's Day came up for questions, being then so near at hand, some of which no one could answer. And we found, too, that no one could explain why Holly and Mistletoe came to be more prized for Christmas decorations than any other evergreen, nor how April-fooling originated, nor why eggs are universally used in the celebration of Easter. So four girls were appointed to read papers on the subjects to-day. You see it is *special* bits of information, like these, that the members are bound to be on the alert to hunt up. We didn't care to be trammeled by any formalities, but just for the fun of it the members are bound to keep the name of our 'Circle' secret, and that obligation comprises our whole constitu-

tion and by-laws. If we fail in this it will prove we are not trustworthy."

Alas, for poor human nature! Irene had unwittingly used the first and last of the three key-words of the society-name in this tale with her sharp-witted mother. Its oddity, she had thought, would evade solution. The "papers" which her mother shortly heard read we may now have the benefit of ourselves.

ST. VALENTINE'S DAY.

In seeking for the origin of the modern custom prevailing on this day the result is unsatisfactory. The ancient Romans were greatly given to festive celebrations, and it has been estimated that their festival days outnumbered their working days. The early Christians adopted some of their symbols and customs in their own religious celebrations because of their prevalence and familiarity. One only, however, of all these seems even remotely connected with the modern significance of this day. During the Roman festivals at this season in honor of Pan, the deity of shepherds, 'the names of young women were placed in a box, from whence they were drawn by a band of devotees.'

This idea, coupled with the season, possibly may have suggested the custom of allowing Cupid to do some balloting on this day after another fashion. But it seems a strange burlesque that a day named in memory of a Romish priest—one of a class which ignores the claims of Cupid and the domestic relation—should have come to be set apart to the wily little god.

One author, after investigation, declares that 'the practical joking which prevails, and the love of fun and caricature, are of comparatively modern date.'

Of St. Valentine we learn that he suffered martyrdom for having assisted the martyrs in their persecution under Claudius II.

'ALL-FOOLS'-DAY.'

An English antiquarian, Francis Douce, (who left manuscript works to the British museum to be unopened until 1900), thought that the idea of the practical joking on the first day of April had been borrowed from the French, who call their April fish *Poissons d'Avril*,—silly mackerel or simpletons—which suffer themselves to be caught in this month. But,

as in England April is not the season of that fish, we have very properly substituted the word fools."

This does not make it very clear, so we'll go further. Of the various theories extant, one traces our custom to Noah—he having sent the dove on a fruitless errand.

Another refers it to our Saviour having been sent from Annas to Caiaphas, and from Pilate to Herod. Still another traces it 'to the change of New Years day in France, 1564, to the first of January, by which April was left with little more than a burlesque of its former festivals.'

One authority states that 'no reference to All-fool's-day is found in our earlier literature, and it would seem that both Germany and England derived the fashion from France.'

From this brief summary, the society may conclude that we are liable to be April-fooled right along, while trying to trace the origin of the custom which characterizes our first day of April.

EASTER-EGGS.

It seems that from the time of Aristotle, who died about 323 B. C.—down to Malpighi and Harvey of the 17th century, there was a constant effort to explain the development of animate life from inanimate substances, as the egg. Continuing investigation, Bonnet, in the 8th century, affirmed that 'a germ [in the egg] absorbs the nutritious matters which are deposited in the interstices of the elementary structures of which the miniature chick or germ is made up. The result of the intussusceptive growth is the development of the evolution of the germ into the visible bird.'(!)

But soon after, 'this doctrine of evolution was completely exploded by Wolff.' More recently we have the various theories of Darwin, Wallace, Spencer, Clifford, Lewes and others. But all fail to explain the evolution of conscious life from inorganic matter. The deeper the mystery the greater the muddle of extraordinary language in which they pretend to elucidate it.

After much research and a deal of tiresome reading, I can only say to the society that it is thought that the old church fathers favored the use of eggs on Easter as symbolizing the idea of the resurrection of the dead.

WHY?

It would not be amiss to represent our little band by an interrogation point. *Why* Holly and Mistletoe are especially prized for Christmas decorations has been asked our members, and to ask a question here is to insure an answer.

The Mistletoe, Holly and Yule log were all used in the pagan festivals. The tree-worshiping Druids considered the Mistletoe an especial gift from Heaven, and therefore sacred. It was severed from the tree with a golden knife by a priest clad in white robes, two white bulls being sacrificed on the spot. Its use was perpetuated by the early French Christians. The annual English supply comes largely from the Apple orchards of Normandy.

The actual birth-day of Christ being somewhat veiled in obscurity, the early Christians, 'about the beginning of the fifth century agreed to celebrate the nativity on the 25th of December *from a desire to supplant the heathen festivals of that period*, such as the Saturnalia in honor of Saturn, one of the oldest and principal deities.' Hence, such offerings of nature as were in common use on festive occasions it seemed proper to adopt, and thus the Holly comes to be associated with Christmas. The name itself is derived from the latin *Christi Massa*—Mass of Christ.

With this paper ended the readings, and Mrs. Spencer withdrew to her own apartments. When, finally she had her daughter to herself, she quietly remarked: "I was quite edified this afternoon by the exercises of your 'Special Knowledge Circle.'"

"Oh, mother! how did you get the name?"

"From your own conversation, mostly."

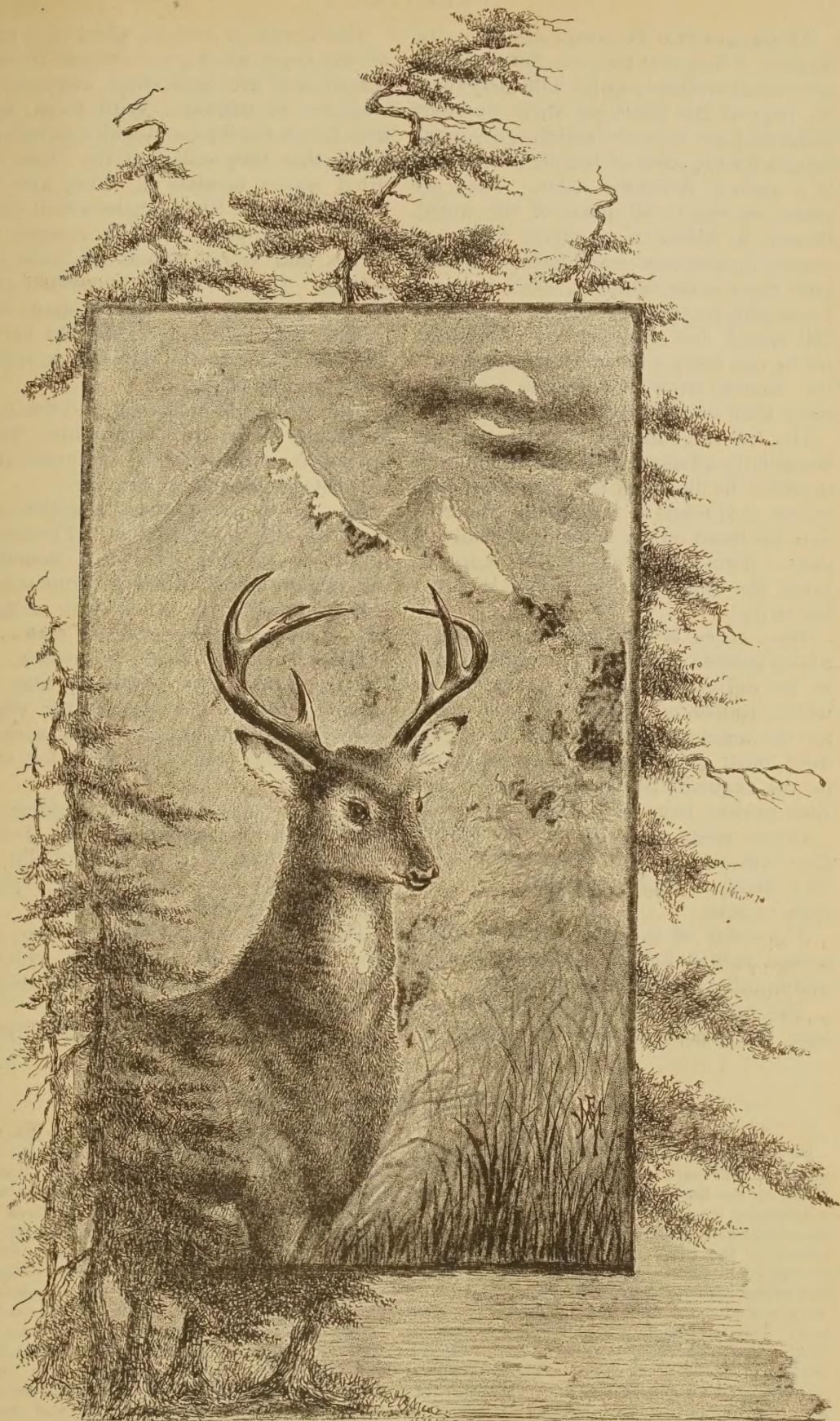
"Well, please do promise not to tell Clarence."

"I promise."

MARIA BARRETT BUTLER.

A LETTER FROM BLANCHE.—I thought I would write to you and tell you about my flowers. I am nine years old. I have two flower beds; in one I have all Tulips, and in the other I have Pinks, Roses, Snapdragons, Heliotropes, and a wild plant that comes up around Mount Hood and has a blue flower; we don't know the name of it.

BLANCHE HAMMETT, *Highland, Oregon.*



FLEETFOOT.

FLEETFOOT.

Pretty, graceful creatures are deer, and so fleet of foot that they are noted for the speed and swiftness which will carry them far beyond the reach of their pursuers when they are hunted—and they are much sought for the sake of the venison, which is a savory, delicious meat. They are found in nearly all parts of the world, though in different countries they vary greatly in appearance and habit. In Lapland there is the reindeer, which is to the Laplander an animal of untold usefulness. His speed and strength are wonderful, for he can carry a heavily laden sled over the frozen snow, sometimes traveling more than one hundred miles a day.

His feet are curiously constructed, and beautifully adapted to the snowy country in which he lives, for the cleft hoof separates or spreads to a degree that renders his tread on the snow comparatively easy. Thus, the reindeer in Lapland takes the place of the horse in other countries.

Then there is the beautiful antelope, also a species of deer. The name is said to be derived from two Greek words, which, translated, mean, "flower eyes," for the antelope and the gazelle, and, indeed, most of the deer family, are famed for the exquisite beauty of their eyes, and their praises have been woven in poems.

Often, when pursued by the hunter, deer will take to the water and swim a long distance rapidly in order to make their escape.

The color of their fur varies, in some it is a yellow brown, in others darker, and in others still of a gray shade.

The legs are exceedingly slender and long, but possessed of great strength.

The horns, or antlers, which the male always rears, are a great feature of their beauty, and are used when necessary as weapons of defence. With them, also, they break the icy crust which covers the snow, that they may find the Moss and dried leaves beneath it. They also eat from the trees the Lichens which cover their bark in winter, and in summer the leaves and young shoots of trees and bushes. Their beautiful horns they shed once a year, but these grow again, only at first they have a covering like velvet, which the deer seems impelled to rub off as soon as possible.

They are timid creatures, and flee from an enemy rather than attack him; but if retreat is impossible at any time, they will defend themselves bravely.

In our own forests these beautiful animals are also found, and the "Fleetfoot," in the engraving, was once bounding through the forests of the Adirondacks.

Deer hunting is so favorite a sport that it became a necessity to make and enforce laws for their protection, for hunters would often ruthlessly slay the animals only for the sake of the chase, instead of being satisfied with such as would furnish sufficient meat for their needs.

There is also the elk, or moose, of North America, called by the Indian name of musa, a powerful animal, almost as large as an ox, with full, branching antlers, somewhat flattened.

There are many varieties of deer, and each fitted for the country in which it dwells, and is in greater or less degree of usefulness to man.

M. E. WHITTEMORE, *New York*.

EDITOR'S MISCELLANY.

ROCKY MOUNTAIN BOTANY.

For years we have been receiving botanical specimens from the country lying between the Mississippi River and the Rocky Mountains, and many of them it has been impossible to determine for want of a descriptive flora of this region. When Gray's second volume of the *Flora of North America* appeared, several years since, some assistance was received, and within a few months another volume of the same work extended the field, but still there was a great lack. This lack has now been supplied by the publication by Ivison, Blakeman, Taylor & Co., of New York, of a *Manual of the Botany of the Rocky Mountain Region from New Mexico to the British boundary*. The authority of this volume will be recognized by all botanists when it is known that its author is Dr. John M. Coulter, Professor of Botany in Wabash

College, and editor of the *Botanical Gazette*, and perhaps it is superfluous to add that it will take rank with the floras of Gray, Chapman and Watson. The range of this Manual includes Colorado, Wyoming, Montana, Western Dakota, Western Nebraska and Western Kansas, the hundredth meridian representing very nearly the eastern boundary. While this is true, the larger part of contiguous floras also will be found described. Students of botany in the region here mentioned will find this volume invaluable for their use. For a long time we have received inquiries for a work of this kind, and could only reply that it did not exist. In arrangement, typographical appearance and mechanical execution the book is very fine, and the low price it is sold at, one dollar and twenty-five cents, places it within the reach of all who may desire it.